

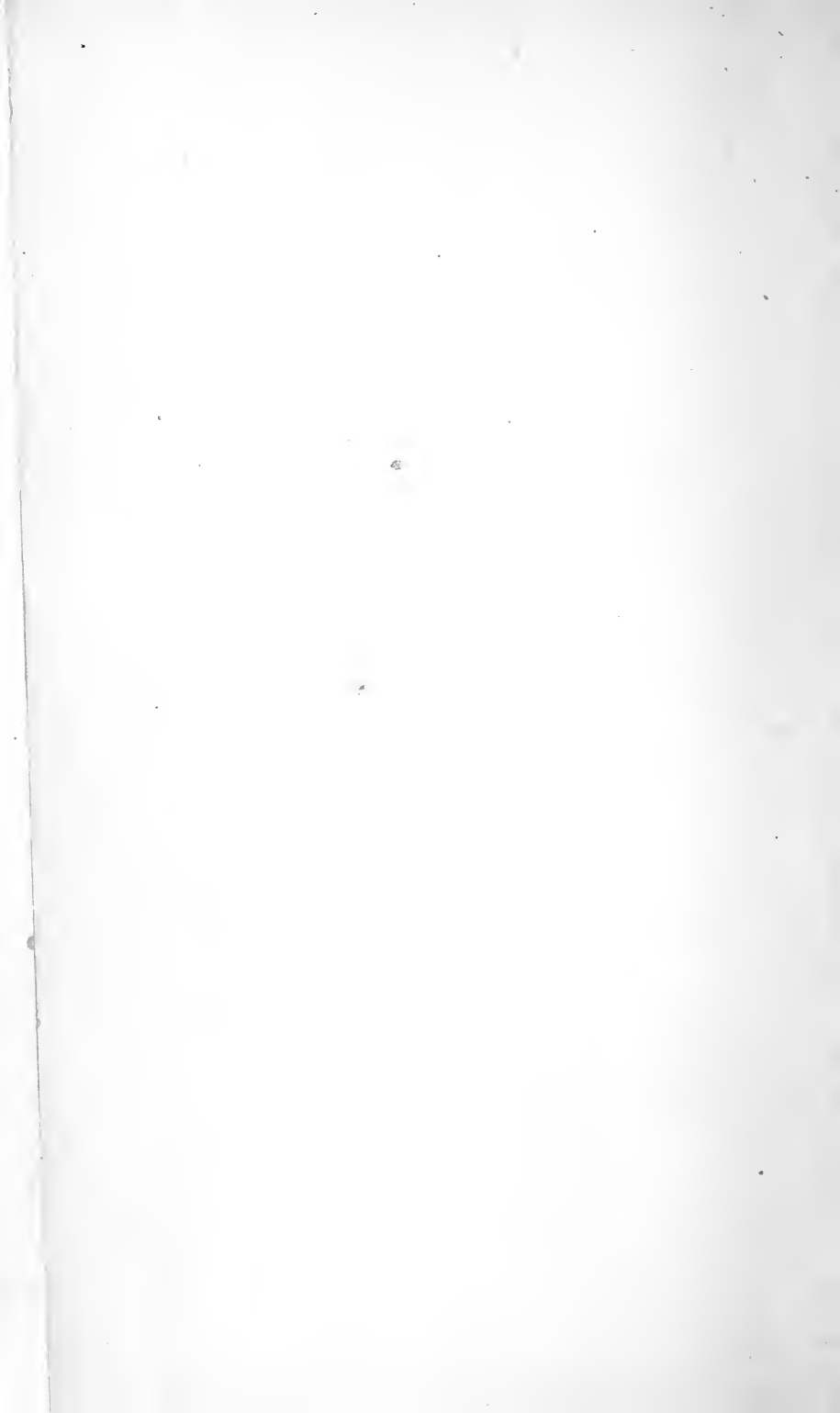


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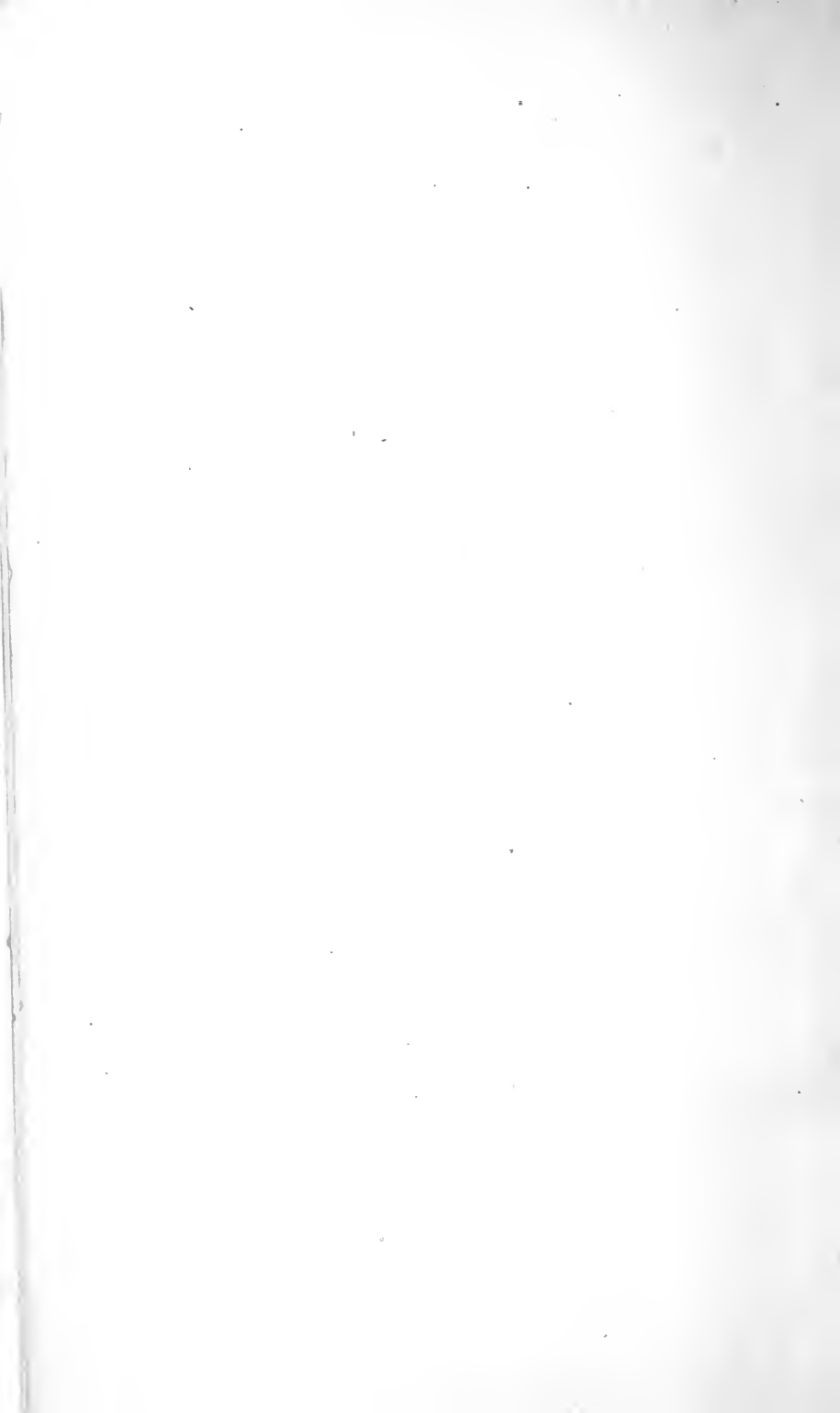
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THE ECONOMICS OF LAISSEZ FAIRE

A NEW EXPOSITION OF THE PRESENT
ECONOMIC REGIME.

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PART I.

BY

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CHAPTER I.

THE FINANCIAL SYSTEM

BANK CREDIT

One of the curiosities of the economic affairs of man is the unconscious and automatic development and operation of laws as mechanical and rigid in their character as those of the physical sciences. Some of these laws are now understood, but most of the essential and fundamental principles in the sciences of economics and finance are as yet in the realm of the unknown. And although it would seem from an observation of the libraries of books that have been written on every phase of these subjects that by this time man has explored and explained the whole maze of the economic order, yet it appears that during the storms and stress to which the system

frequently gives vent, man is entirely helpless and blind and all the academic learning and libraries are of no avail. An individual may be in firm control of the work of his own hands and mind, but it seems that when his interests merge with those of his fellow men in the arena of commerce and industry they are influenced and controlled by larger principles as yet beyond his understanding and control individually or collectively.

One of the phenomena thus inexplicable and mysterious is the financial system of the present day. Beginning with barter and exchange down to the use of money as a medium of exchange, the financial systems were simple in their nature and clearly understood. Today, however, the use of actual money as a medium of exchange is comparatively as obsolete as barter and exchange. Instead we have the modern bank credit as a medium of exchange by which almost the whole bulk of business is transacted.

It is a well known fact that banks are able to make loans amounting to five, ten, and even twenty times the amount of money in their possession. This is the riddle of the bank credit system, numerous analyses and explanations of which have been offered by various authors, a perusal of which analyses, however, is convincing of the need of further explanation.¹ Let us suppose that the manu-

¹Note. The following are analyses of the bank credit system by eminent authors.

"Thus as a rule when a bank discounts a note for a customer, it at the same time increases its deposits; that is to say, it increases its indebtedness to depositors. The word "deposit", as is shown by this illustration, is a banks promise to pay money to an individual, to a firm, or to a corporation. The evidence of the promise is merely an entry in what is known as a "pass book". Banks have learned by experience that all their depositors will not call for all the money due them on any one day, and so are enabled to make loans of this character much in excess of the amount of lawful money which they have on hand. (Ed. Comment. But in the long run all these "deposits" are paid, so that the bank would need an amount of cash equal to its loans, as on the average daily loans cannot exceed the daily cash on hand.) * * * * They are more than lenders of other peoples money; they lend their own credit. If they could not do that their transactions would be much smaller in volume than they are now, and

facturers of a community, having sold all their goods to the distributors or storekeepers on credit and received the latter's notes as security for the price, proceed to borrow an equal amount of money from the banks on these notes to pay the cost of production.

their profits much less." J. F. Johnson, *Money and Currency*, page 45.

"The explanation of the adequacy of a mere fractional reserve is found in the nature of the individual monetary demand and in the effective way in which a checking account serves as a substitute for actual money. Every customer if he would avoid overdrawing his account, must at most times keep a goodly balance to his credit that he does not immediately need. Many individuals and corporations must at times keep very large balances. The times of maximum monetary need of the customers of a bank never exactly coincide, and many payments are made among the customers of a single bank, requiring only bookkeeping transfers. A fractional reserve is therefore ordinarily fully adequate, altho with any less than 100 per cent reserve any bank would be insolvent if all its demand obligations were presented at the same instant. * * * * The capital with which a bank starts in business could be loaned with less trouble and more cheaply without starting a bank, but used as a banking capital it can be loaned in part while still serving to attract deposits, which are the main source of the income of banks today." F. A. Fetter, *Modern Economic Problems*, Vol. II, page 100.

"Suppose that a country merchant, A, has been buy-

The banks instead of giving money to these manufacturers extend credits on their books in their favor, against which they can draw checks. The manufacturers now draw checks in payment for materials, of wages, salaries, interest, profits, etc. The recipients of these

ing wool, which he takes to New York and sells to B, a wool broker, for \$1000. B pays A by a check on his bank, X. B at once sells the wool to a manufacturer, C, and C pays B by a check on the same bank. Then C sells cloth to D, a wholesale dealer in dry-goods, to the amount of \$1,000, and is also paid by a check on X. Finally, A, before going home, purchases dry-goods of D to the amount of \$1,000, and pays D by giving him the check he received from B on the bank X. No money was required in all these transactions. A was the owner of B's deposit, and he gave his right to D. Now D gave a check to C for \$1,000, and thus transferred his right to a deposit of \$1,000 to C, and C gave a check for the same sum to B. So, at the end of the whole circle of transactions, B has the same sum (leaving profit aside) on deposit as at first; no money has left the bank; no money was used by any of the four, and yet the four transactions amounted to \$4,000. * * * * The extent to which checks thus save the use of money is marvelous." J. L. Laughlin, *The Elements of Political Economy*, page 170.

"Ordinarily the borrower is content to receive the loan in the form of a credit account on the books of a bank, upon which he may draw checks at will. Thus the discounted value of the mercantile paper or note is credited to the borrower as a deposit. In most modern banks

checks deposit them in the banks to their individual accounts, and draw their own checks in payment for goods purchased from the storekeepers. The checks so drawn aggregate in total value to the amount of the checks drawn by the manufacturers, are received by

of deposit the vast mass of the deposits are created in this way. In effect the borrower has merely exchanged his credit for that of the bank. He is ready to pay current interest to the bank because the latter's credit is generally accepted and serves all the purposes of ready money.

"It is clear that in so far as a bank makes its loans from its capital, it can use for that purpose all that is not needed for running expenses. It should be remarked that commercial banks must have a considerable capital of their own, not only for running expenses, but also as a guarantee to depositors. * * * * But if a bank can employ all its capital, it cannot employ all sums deposited with it in making loans, because occasions are always occurring for removing deposits as well as making them. Business men, for example, day by day, draw out such sums as they require for the payment of purchases of goods, wages, rent and other expenditure." *International Encyclopedia*, Vol. 1, page 624.

"And so too if the recipient of the check gives it in payment to some third person, and he to a fourth, and so on. To this extent the check is plainly made a substitute for the sum of money for which it calls. * * * * What natural limit is to be found then to the continued circulation of a liability for deposit when once it is created and set in motion by the process of "discount"? Plainly,

the storekeepers and by them transferred to the manufacturers in payment of their notes, and by the manufacturers deposited in the banks in complete cancellation of their debts to the banks. In other words the whole industry and commerce of the community was

if at any stage the holder of a check instead of depositing it, demands its payment in money by the bank on which it is drawn, the payment extinguishes the liability to that extent. * * * *

"A more important limit is found, however, in the use of deposits for the payment of debts due to the bank. * * * * Such a payment of the debt due by the depositor, and previously standing among the securities or loans of the bank, finally cancels a liability of the bank, equal in amount to that which was created when the loan was made. * * * *

"It is possible, indeed, that the payment should be made by the debtor to the bank in money, or by a check drawn against a *fresh* deposit of money, and in this case either there is no extinguishment of bank liability by the payment, or only the new liability created by the *fresh* deposit is extinguished. But in a community where banking is firmly and widely established, the great payments of commerce and of general business are certain to be made, for the most part, in the medium which is most accessible, and most convenient for use in large sums, and this medium is undoubtedly that which is commonly termed bank deposits. * * * * It appears then that deposits are created by the act of the bank, when loans are *increased*, and that they are cancelled when loans are paid. There is,

financed without the use or necessity of real money.

To put it in more general terms, suppose that the banks of a community, without any money whatever in their possession, extend ten billions of dollars of credit on their books

therefore, a rough correspondence between the *movements* of loans and of deposits. This correspondence may be weakened by the actual flow of money to or from the bank. * * * *

"Another important investigation of the same kind was made by the controller at two corresponding dates in 1890 with the remarkable result that * * * * the proportion of checks and drafts was found to be * * * * in the United States as a whole 92.5 and 91 per cent."

Dunbar's, History and Theory of Banking.

Ed's italics.

Edit. comment.

The 9 or 10 per cent. cash receipts signify nothing in particular, as the check receipts may all repeatedly represent the same former cash deposits which circulate in the form of checks, and the debts to the bank may also be paid by check of former cash deposits. Thus all depositors deposit cash, and checks on cash deposits in the bank, and all deposits say are, therefore, cash deposits. In the interval of the idleness of these cash deposits or their circulation by check, the bank lends this cash to borrowers who draw checks against it and also a certain amount of cash, the recipients of the checks either cashing them, or depositing them and partly drawing checks and cash, and so on. Let us say that in this manner ten per

to all the manufacturers of the community to defray the expenses of production. These manufacturers draw checks against the banks in payment for materials, of wages, salaries, interest, profits, etc. The recipients of these checks return the same to the manufacturers

cent. of cash is daily withdrawn, the usual amount. In a few days the bank has only about enough cash left on hand to maintain its reserve. The cash drawn out begins to come back to the bank also at about the rate of 10 per cent daily, (90 per cent of total receipts being in checks due to their continual circulation and redeposits,) being deposited in the bank by the recipients, or by the borrowers, repaying their debts to the bank. As this cash comes in at the rate of 10 per cent. it is again loaned out by the bank, the latter thus never having much more cash left on hand than the reserve. Thus there is no indication that the bank can make a greater amount of loans than the money in its possession. And if it can there is no method demonstrated in the author's analysis to show it, much less to what extent if to any. The ratio of the circulation of about ten per cent of cash to checks is of no special significance in this regard.

"The borrower brings to the bank his promissory note, perhaps signed only by himself, perhaps fortified by the indorsement of others. The bank then credits him with a "deposit" of the amount of his note, less the agreed interest. He has the right to draw on the bank as if he had actually deposited money. That right he may exercise either by demanding cash directly at its counters, or (more probably) through a check, which directs the bank

in purchasing the latter's goods. The manufacturers deposit these checks in the banks and cancel their whole indebtedness. Or more precisely, the various recipients deposit their checks in the banks to their individual accounts and draw their own checks in

to make payments to others. The first step in the ordinary commercial loan is the creation of such a depositors relation with the bank.

"But it is obvious that this first step will have no special consequence if the depositor exercises his right at once. If he draws out immediately the full amount credited to him, the result is the same as if he had carried off cash without the intermediate step. And it may appear that this is what he is likely to do; for he borrows with the purpose of using money means in business operations. But any depositor who did this, and who had no other relation with the bank, would be an unprofitable customer, and not one to whom the bank would habitually extend "accommodation." All banks and especially the commercial banks of deposit deal chiefly with their own circle of customers. These are both borrowers and depositors both creditors and debtors. They keep their account with the bank, and there is a tacit understanding, not infrequently an explicit bargain, that the amount of 'loan accommodations extended to them shall be in proportion to the balance which is on the average to their credit as depositors.

"It is possible, even probable, that very soon after a loan is made, the borrower will draw heavily against it. He is not likely to draw out the full amount; for every

payment for goods, (many of these checks being paid to farmers for food are by them returned in the purchase of goods) which checks aggregate in money value to the amount of the checks drawn by the manufacturers, are received by the latter and de-

man and especially every business man, wishes to keep some balance at the bank as a reserve for contingencies. But even if he draws out the larger part, his bank balance does not long remain depleted. Payments to him from his customers and debtors flow in from day to day, and are deposited in the bank as they come in. Meanwhile, as the days and weeks pass he must prepare for the maturity of the note with which the transaction began. He does so by accumulating deposits, and toward the end of the period during which the note runs he has larger amounts to his credit. When his note becomes due, he pays it by drawing against the accumulated deposits; that is, essentially he offsets the debt which he owes on his note against the debt which the bank owes him on deposit account. Therewith the transaction is wound up. (Ed. criticism. But when he draws out the "larger part" the bank must pay it, and when he replenishes his balance by his own deposits he need never draw out the remainder of his loan, while the bank is obliged to pay its actual loans in full. The point has not yet been advanced a single step.)

"But this transaction does not stand alone, and this business man does not stand alone. He will resort to the bank again for loans, and others will also resort to it; for all men in active business are borrowers, in order

posited in the banks in complete cancellation of their indebtedness. The whole transaction is performed without the use or necessity of real money.

However, at the present stage of the development of the bank credit system a certain

to carry on their operations continuously and on a larger scale than their own means permit. Their transactions with the banks are repeated in an endless series. Suppose now that a number of such persons are dealing with a bank as borrowers and depositors. While some are discounting and are drawing heavily on the deposits created for them, others are preparing to meet their maturing notes and so are depositing heavily. Some happen to have made large payments in the ordinary course of business, and their deposits are scant; others have been receiving large payments, and their deposits are heavy. At any given time the bank has a volume of deposits, large or small according to the business it has built up, and has corresponding resources in the way of notes discounted. Probably it has also some deposits of the non-business kind, independent of its lending operations; and probably it has also some loans not related to its deposits. But it has continuously a volume of resources (debts to it) closely related to a corresponding volume of deposits (debts due by it.) (Ed. criticism. But how does all this enable the bank continually to lend and pay many times the amount of actual money ever in its possession from all sources? On the contrary, the author himself states that withdrawals of money from banks must be preceded

amount of cash determined by experience is necessary to be kept in reserve by the banks to cash the checks of low waged laborers and to furnish the conveniences of small change. The amount of money necessary for the latter purposes is less than may at first thought be imagined. For as soon as this money is received by the business men it is deposited in the banks and is again issued for further

by corresponding receipts by the bank. In other words the bank can only lend money it receives as deposits.)

“Deposits in their operation as a circulating medium are among the most marvelous of economic phenomena. Like the division of labor which they serve to facilitate, they have developed by no intention, and have had little restraint or guidance from legislation. They work out their results by processes which are but half understood by the very persons who manage them. * * * * It consists of a mere mass of debts, contracted without any formality and evidenced only by a few figures on bank ledgers and pass books. It is a sort of phantom circulating medium ever appearing and disappearing, never substantial, always in danger of melting away from a breath of suspicion, yet so serviceable as to be renewed after every collapse and to be maintained notwithstanding every danger.”
F. W. Taussig, *Principles of Economics*, Vol. 1, page 338.

use.² However, even the necessity for this comparatively small amount of money could be done away with, as already noted, by a universal use of checks, or by the issuance of such instruments as clearing house certificates, or bank notes in denominations as low as one dollar or even five cents.

We see then that under this bank credit system, it is possible for the banks, possessing together no more money than any single one of their smallest borrowers, or none at all, to issue infinite amounts of 'money', re-

²Note. The stock of actual money need only be large enough to cover one cycle of industrial disbursement, as for one week or two weeks or whatever the average may actually be between industries paying weekly and bi-weekly, etc. As, statistically, the income of labor, the class that uses cash instead of checks, is from 15% to 20% of the value of the total product, that corresponds with the cash reserves which the banks find it necessary or are by law required to keep on hand. The small change used by the other classes is offset by the facts: that distributors or storekeepers draw no cash from the banks for personal use and to pay their employes, using the cash receipts from customers for those purposes; and by the daily cash which these storekeepers deposit in the banks.

ceive interest thereon, and finance all the industries of the whole country. It is obvious that this absolute power of contracting and expanding the volume of money infinitely and to purely imaginary and boundless proportions will affect the natural prices of commodities and labor. And herein as will be shown in a succeeding chapter lies the cause of panics, and other great evils, economic and ethical.

But why is bank credit necessary? If the manufacturers could give their own goods in payment of wages, salaries, interest, profits, etc., no borrowing would be necessary. But under the present specialized system of production goods must first be sold before these payments can be made, while on the other hand these payments must be made before goods can be sold, or there will be no one to buy goods. This dilemma is obviated by the manufacturers borrowing 'money' from the bank, paying wages, salaries, interest, profits,

expense for materials, etc. and immediately receiving this very same 'money' back in the sale of their products. Their disbursements constitute their receipts. This credit if not abused by the banks is nothing more nor less than a bookkeeping system for the exchange of commodities backed by the guarantee of the banks. It is the unwarranted use by the banks of the infinitely expansive nature of credit to extend more of it than is necessary for the purposes of mere exchange of commodities which is responsible for many of the great ailments of the present economic system as we shall see later.

We may now observe the *modus operandi* of the credit system within the banks themselves. Let us suppose a community with only one bank. This bank lends credit to the manufacturers of the community to defray the cost of production, the latter drawing checks on the bank in payment of wages, salaries, interest, profits, expense for materials,

etc. The recipients of these checks deposit them in the bank. The loans and deposits are now equal and no money has been paid out by the bank. Now a reverse process sets in. The depositors proceed to spend their deposits in purchase of the manufacturers', or bank debtors' goods, and their deposits are transferred to these debtors by checks, received by the latter and deposited in the bank in complete cancellation of their indebtedness to the bank. Both loans and deposits had now disappeared from the books of the bank, followed by new loans for further production, deposits, etc. No real money had been used in the entire transaction. The finances of the community are thus conducted without the use of real money, except to the extent that it is necessitated to cash checks of low waged laborers, and by the conveniences of small change.

If there were in existence such an isolated, industrially self sufficient community with

only one bank, this simple economic circular channel of financial circulation would be plainly discernible on the books of the bank. With intercommunal industrial relations and a multiplicity of banks, however, the simple basic circulation, or the mechanism of bank credit, which finances all industry without the use of money is obscured from view.

Thus the mechanism of bank credit may not be apparent even to the banker himself. Suppose there are two banks in the community, A and B. Each one of these banks extends on its books one thousand dollars credit to its customers. Say a one hundred dollar check is drawn against the credit accounts in bank A and is deposited by the recipient in bank B, while a check for a similar amount is drawn against the credit accounts in bank B and deposited in bank A. Now each banker finds that his actual deposits are equal to his actual loans. For he considers deposits of checks on other banks as actual

money deposits, which he sets off against his own loan checks in the clearing house, and thereby spares himself the necessity of paying out money on his loans. In other words his loan checks passed on and he was not obliged to pay out money because of the corresponding increase in his actual deposits. Thus actual loans, not loan credit, become at the same time an actual and equal amount of deposits, as distinguished from discount or credit deposits, i. e., the amount of checks drawn against a bank is approximately equal to the amount of checks deposited in it, as all the loan checks drawn against all the banks are deposited in these banks as money deposits. The banker always finds that his actual deposits are approximately equal to his actual loans and must be so or the clearing house balances against him which must be paid in cash would close the strongest bank in two or three days. Whereas, as a matter of fact, there need not be a single real dollar

deposited in the whole country, but all deposits may be nothing but loans. The total of actual credit extended in a community constitutes simultaneously the total of actual deposits, and as the volume of credit increases the volume of deposits increases to an equal amount, and thus credit may be expanded infinitely with resulting equal increases in the total of deposits.

Now the reverse process is set in motion. In accordance with the underlying organic economic principle, the deposits are transferred to the producers or borrowers in the purchase of the latter's goods and cancel their indebtedness, with the result that both loans and deposits have disappeared from the books of the banks. This reverse process results in a continual disappearance of equal amounts of deposits and loans. These are, of course, followed by new loans for further production, deposits, and so on.

The position of the producers of raw ma-

terial or intermediate products in the credit scheme may be noted. The manufacturers of end products having borrowed credit from the banks, among others, draw checks in payment for material, the material producers in turn draw checks in favor of their personnel, the latter make checks payable to manufacturers of end products, who in turn settle with the bank, and the circle is completed.

The vital principle of the bank credit system which makes it possible of 'efficient, direct, rapid, smooth, and practical operation' even to the extent of a 'sole and exclusive medium of exchange is this universal and evenly balanced economic division of producer and consumer. The loan to the producer or manufacturer for the production of his goods is ultimately paid over entirely as incomes to people, to the productive and simultaneously consuming forces, which are deposited in the banks, entirely balancing the loans, to be used for the purchase of

goods, and their withdrawal from the bank for the latter purpose extinguishes the producer's loans. In other words the producer's loans are the sole origin of the consumer's deposits, and the only avenue for the expenditure of the latter's deposits is their direct and inevitable return to the producer. The bank thus becomes merely a community bookkeeper, first in effect debiting the producer in dollar units, and crediting the consumer to an equal amount, then reversing the process it debits the consumer and credits the producer and the whole transaction is wiped off the books. This is accomplished through the instrumentality of checks. The symmetry, therefore, of loans and deposits, and the vertical, as it were, and direct movement of all deposits toward the extinguishment of all loans is due to the underlying balanced division of the whole economic community into producer and consumer.

This operation of the credit system is an

organic interrelated process, reflecting a principal basic operation of the economic system of producer and consumer. The action and reaction of this process is uniform and inevitable. Its sequences are organic, the disturbance of any one of which will destroy the whole process, or the bank credit system. It may be compared in its organic and rhythmic action to a cycle of movements of the pendulum of a clock. Starting at one extreme as loans, the pendulum swings to the opposite extreme and becomes deposits, reverting, deposits swing back to loans, neutralizing each other and disappearing, the pendulum starting again as new loans, and so on. The credit system thus operates like clockwork through the banks in its organic sequence and rhythm. This process goes on gradually, however, as not all loans are made at one time and not all deposits are withdrawn at the same time.

To summarize, the principles that operate

in the bank credit system are: (1) that loans form deposits, and the transfer of deposits in the purchase of goods necessarily extinguishes both loans and deposits, the whole process taking place through the instrumentality of the check and without the use of money; (2) that there can be no deposits without preceding loans, and no loans without consequent deposits, as nearly the whole medium of exchange consists of bank credit; (3) that loans can be expanded infinitely and will be followed by corresponding and equal increases in deposits; (4) that to the extent that money is used instead of checks a certain amount of money experimentally determined must be kept in reserve by the banks, and must be increased proportionately with the expansion of credit and will therefore act as a check on the latter. If the stock of money, gold or government currency, in circulation should double, bank credit will correspondingly be doubled, and vice versa, etc.

In a community where there are a number of banks the total amount of loan checks drawn against all the banks will be deposited in these banks, and as a whole therefore loans and deposits will be equal. Each bank, however, must take care that the amount of loan checks drawn against it does not greatly exceed the amount of loan checks against other banks and itself it receives as deposits, otherwise the clearing house cash balances would close it in a day or two. The goal of each bank therefore is 'depositors. The more depositors it gets who deposit loan checks the more loans it can make. As to whether or not a bank can get depositors depends, of course, upon its reliability, character, resources, and ability to make safe loans.

A general expansion of credit by all banks will result in a corresponding increase of deposits in all banks. However an undue expansion of credit by an individual bank while it will be followed by a corresponding in-

crease of deposits in the banks as a whole, it probably will not correspondingly increase the deposits in the particular bank making the loans. Therefore credit expansion by an individual bank must be gradual, cautious, and based upon knowledge that other banks are similarly expanding credit, or upon a preceding increase in its deposits.

Furthermore, a bank finding that with an X amount of cash always present in its vaults in the preceding year it was able to maintain an $10X$ amount of loans throughout that year, and now suddenly acquiring an additional X amount of cash it should reason that it can therefore extend an additional $10X$ amount of loans next day, it will be mistaken. For the cash balance against it in the clearing house next day will be $10X$ dollars or ten times the amount of cash it ever had during the preceding year and five times the amount it now possesses. In order to increase its loans by an additional $10X$ amount on the

strength of its new X amount of cash it must receive back as deposits, the whole additional $10X$ amount of loan checks issued against it, or an equal amount of checks on other banks.

CHAPTER II.

INDUSTRIAL DEPRESSIONS

It is popularly held, and often asserted in the press during periods of industrial depression, that these depressions are due to overproduction. That is, there is a greater supply of commodities manufactured than there is demand for, resulting in the shutting down of many factories, and unemployment, a further decrease in demand due to the unemployment, followed by further closing of factories and more unemployment, and so on, until the whole industrial fabric is in a state of paralysis. This view is repudiated by the economists, for it is asserted by 'Say's Law' in economics that there can be no such thing as overproduction. For all commodities on the market constitute at the same time the

supply and the demand, for they exchange for each other, so that the supply can never exceed the demand and vice versa. In other words supply and demand are always equal and there can be no overproduction or underproduction.¹ This theory in the main is plausible and effectively disposes of the concept of overproduction and industrial depression due to such overproduction.

But what for instance would happen if

¹"In support of this theory it is said that every crisis or depression is marked by a glut of supplies in the market, by the inability to dispose of stocks of merchandise or to transfer convertible property of any kind at fair prices. Increased production in itself, however great, cannot be a misfortune or cause a crisis * * * Human wants are of infinite variety, and the strongest desire is for abundance. Modern invention, improved facilities for transportation, better methods in transaction of business and in the utilization of capital, all tend towards securing greater abundance. These must be a benefit, because they increase the supply of necessities and comforts of life." T. E. Burton, *Crises and Depressions*, p. 115.

"To say that general over-production is possible is to allege that the human race can create more than it can use, and that men love to toil rather than to enjoy, deductions contradicted by all experience." *Ibid.*, p. 126.

there should be an oversupply of capital, a capital capacity for production in excess of population, that is a greater amount of capital than there is labor to operate? Such an eventuality is not beyond the range of possibilities. Capital is cumulative. Each year sees tremendous additions to its supply, and unless we postulate an ever corresponding increase of labor, there may be times when the supply of capital is in excess of labor.² Apparently 'Say's Law' does not fit such a situation. It is true that consumable commodities constitute their own demand, and exchange for each other, and if more of all commodities have been produced this year

²If we were to awake one morning and find that the population remaining the same the whole capital of the United States suddenly doubled, that is, there are now twice as many factories and industries as before, all competing for the same limited supply of labor and material and for the sale of their products on the market, we should have an ominous situation, to say the least. The quantitative relation of capital and labor is obviously a most serious question which hitherto escaped attention. But while the capital of this country never doubled in a

than last year so much to our advantage, as we have more of everything. Human consumption is elastic, the more we have the more we use. But it is obvious that there is no profit in a mere exchange of idle factories, or idle parts of factories, for one another. Under all circumstances, then, the possibility of such a portentous situation, because also of its other possible bearings in the field of economics, as upon interest and wages, etc., must receive some serious attention.

Factories and industries, of course, produce commodities in advance of their sale.

single night, which were an unessential extreme, the following statistics are of equal significance:

Year	Capital		Population		Crises
	Invested in Manufactures (\$1,000,000,000)	Increase per cent.	Increase per cent.		
1850	0.5		
1860	1.0	100	35.6		1857
1870	2.1	110	22.6		1866, 1873
1880	2.8	33	30.1		
1890	6.3	132	25.5		1882-4, 1893
1900	9.8	51	20.7		1901
1910	18.4	105	21.0		1907

It will be observed that in each decade preceding the

In many instances production is say six months in advance of marketing. In others it is less, or more. These commodities are marketed gradually in accordance with normal consumption. We shall name for our purposes the supply of commodities between actual production and the actual marketed complement, the 'reserve supply', and the marketed complement the 'market supply'. It is self evident that factories are always engaged in the production of the 'reserve supply', as the latter is the immediate antecedent of the 'market supply'. Now with the entry of new factories in excess of the labor supply (Capital, as we have seen, may actually double in the period preceding a depression. Footnote 2, ante.) for the production of goods, three results ensue.

year of crisis the total capital of the country doubled as compared with labor. While much of this capital is invested in the substitution of improved, more costly machinery in place of the old, the greater portion is devoted to extension, a rounded multiplication of industrial and manufacturing units.

See page post.

1. There is competition for the limited supply of labor, and a consequent increase of wages.³ And we may assume that labor distributes itself proportionately to all factories and industries. It is apparent that there is now an excess of capital equipment in all factories, which must remain idle, because of the shortage of labor, and results in a loss of interest, profits, and principal of this idle and deteriorating capital.⁴

³ "This preceding period is characterized by well-defined indications: * * * * difficulty in obtaining a sufficient number of laborers to meet the demand.

"4. The general employment of labor at increasing or well sustained wages." Ibid., pp. 51-52.

⁴ "The central fact in all depressions, as well as in those crises which are followed by depressions, is the condition of capital. These disturbances are due to derangements in its condition which, for the most part, assume the form of waste or excessive loss of capital, or its absorption, to an exceptional degree in enterprises not immediately remunerative. In some form or other this waste, excessive loss, or absorption, is the ultimate or real cause." Ibid., p. 68.

"The first is characterized by the employment of labor and the expenditure of unusual amounts of capital in preparation for increased or improved production. This is followed by the second period, which is a season of readjustment to new conditions in which there is a great

2. Two kinds of competition in prices take place, one fundamental and permanent, the other superficial and temporary.

(a) Owing to the general excess of capital equipment each manufacturer tries to sell as much goods and reemploy as much labor as possible in order to run his plant to full capacity, increase profits, and retrieve losses on idle capital. The competition for the market results in a decline of prices. This fundamental competition prevails as long as there is an excess of capital.

(b) The permanent competition just referred to, however, becomes operative after the industrial depression had begun, as before it can become effective a crisis is precipitated by a temporary superficial competition which initiates the industrial depression. The total production of commodities is now

disparity in the supply of numerous commodities and facilities and the demand for them. * * * * This re-adjustment is accompanied by serious loss to those whose capital has been rendered useless or whose labor has been displaced." Ibid., pp. 97-98.

the same as formerly, for the number of laborers is the same, and the amount of capital they actually operate is necessarily the same, although less in each factory than hitherto because of the additional new plants in operation. But these new factories having drawn away part of the labor engaged in the manufacture of the pre-market supply or 'reserve supply' in the old factories, and which are, therefore, really manufacturing part of the old 'reserve supply', immediately throw their commodities on the market in order to realize upon them as soon as possible with the result that there is a supernormal, excessive 'market supply' of commodities and a consequent sharp decline of prices. In other words, due to the excess factories the reserve supply suddenly came into competition with the market supply.⁵ On the surface

⁵"The prices of many kinds of property decrease on account of the oversupply due to increased equipment for production, improved methods, or the competition of new fields." Ibid., p. 98.

this situation appears to the business man as one of overproduction and overstocking.

3. Wages having risen, prices declined, and there being an excessive market supply of commodities, coupled with the burden of the general excess idle increment of capital equipment, a succession of failures and disemployment follows. As liquidation and disemployment proceed supply and demand of commodities correspondingly decrease, and the strained situation in the balance of industry remains unchanged. For demand, due to the unemployment, decreasing in correspondence with defunction of capital, the competition for the market by excessive capital, the 'overmarketing', and the losses due to idle excessive capital, in the balance of industry, continue in the same proportion, and liquidation proceeds automatically and inde-

"The whole level of prices is lowered * * * * and thus the whole machinery * * * * of industry and trade is thrown out of gear. There is stagnation in trade and manufacturing * * * * men are thrown out of employment." Ibid., p. 60.

finitely.⁶ This wave of liquidation and disemployment is tremendously magnified and accelerated by the factor of the interdependence of modern industry. The direct effects of failure are individual but the indirect effects are universal. The shutting down of one factory and the consequent unemployment curtail the supply of one commodity but decrease the demand for all commodities. The failure of concerns hastens the failure of creditor concerns. The failure of concerns causes the failure of creditor banks, and the failure of banks in turn causes the failure of creditor concerns. The shutting down of one factory may curtail the supply of materials for many factories. One wave of liquidation magnifies the succeeding wave of liquidation, and so on. Once the house of cards is shaken at the foundation and the

⁶The stream of liquidation and disemployment comes to a halt when the discrepancy between capital and labor in the remaining industry is practically eliminated. Such a point is bound to be reached. For the liquidating units control the least of the market and labor in proportion

effects are incalculable. This process of disintegration continues automatically until industry is reduced to a state of stagnation, and we have a full fledged industrial depression.

It is to be noted then that there is a double process of liquidation: the primary, or motive force of excess capital, which alone would reduce industry to a state of depression; and the secondary process, or factor of interdependence, set in motion by the primary, which exercises a tremendously accelerating effect.

During the long period of the depression prices are very low and unemployment great. For though there is now plenty of unemployed labor demand for commodities is correspondingly diminished, and permanent com-

to their invested capital, i. e. do the least business compared to their capital, so that solvent capital decreases more rapidly than employment, and equality between capital and labor in remaining industry is gradually approached.

petition (referred to under 2a) of excessive capital for whatever market there is holds prices down to low water mark (Liquidated capital, being still in existence, and having changed owners, will revive at the least opportunity.) Reemployment cannot take place, until conditions change fundamentally, for the same reason that caused the unemployment.

Such a situation, is, of course, based on the condition of an excess of capital over labor, and could not occur otherwise. For if labor correspondingly increased with capital there would be no effect upon wages and prices, no 'overmarketing', as the additional marketed products would be consumed by the additional labor and the population they represent, and no ensuing depression.

Hence, after a long era of prosperity, savings, construction, and overexpansion, when capital becomes greatly in excess of labor, there must follow an industrial collapse, or

depression.⁷ This depression initiated by the 'overmarketing', thus finds its root, and compelling and preserving force in the deeper fundamental and latent characteristics of the situation. The general overcrowding of capital in production, due to the great excess of capital over labor (manifested by a great scarcity of labor on the market), leads to desperate strife for survival: taking the form of competition for the limited supply of labor, increasing wages, decreasing prices, and deterioration and loss on idle excessive capital. Liquidation and unemployment immediately follow this short period of economic strife,

⁷"In the preceding chapter, it has been pointed out that crises and periods of depression occur in countries where progressive forces are potent and there is rapid growth. Large accumulations of capital, which render increased enterprise possible, often furnish the basis for them. * * * * The important feature in their occurrence is the increasing proportion of expenditures in preparation for increased production, manifesting itself in the formation and prosecution of new enterprises and the building on a large scale of railroads, ships, and factories, and the providing of other means to meet increased demands. At times these expenditures for increased pro-

and the process of disintegration proceeds automatically and with increasing force until the whole industrial fabric is brought down to a state of collapse and stagnation. And as long as this congestion and glut of capital lasts industry cannot raise its head, must remain prostrate, and there can be no resumption of normal industrial life.

We have then the industrial cycle, of periods of prosperity and expansion followed by periods of depression and contraction. The period of depression continues until the population grows up to the higher capital capacity for production, or this capacity is reduced

duction attain an unusual proportion as compared with the ordinary expenditures for annual consumption or support. * * * * The beginning of a period in which large amounts of capital are invested in these new enterprises is marked by increased activity. Actuated by the profits which are obtained in such a period, expenditures of capital will not stop when provision for sufficient supply of present wants is made, but will continue until the demand is more than supplied. These influences must bring a time when enterprise is overdone and supply exceeds demand, certainly in numerous lines of production, when this time is reached, prices fall, enterprise slackens, and, as a re-

by decay and destruction, or rectification by a combination of both these processes. Then follows a new period of prosperity and over-expansion succeeded by another depression, and so on. We have thus regularly recurring, alternate seasons of prosperity and depression, periodic cycles. The duration of a cycle is about one decade.⁸ On this point Professor Leone Levi says:

sult of falling prices and diminished employment, a change must occur. For a time the length of which will be determined by the extent of the overequipment for production and the exhaustion of resources, price will be low and supply will exceed the demand; but at the end of this period there is an adjustment under which conditions are better than before, because there will be a larger quantity of the necessities, comforts, and luxuries of life." T. E. Burton, *Crises and Depressions*, pp. 306-307.

"A potent reason for these recurring seasons of speculation and rash enterprises in England has been the large accumulations of capital seeking investment. These are frequently so large as to require new fields of activity * * * * Reliable historians give instances of companies formed and projects for the use of English capital which seem almost beyond belief. In speaking of the redundancy of capital existing towards the close of the seventeenth century, Lord Macauley, etc." *Ibid.*, p. 42.

⁸"The most confident advocates of the theory of periodicity assign to these cycles a definite and nearly equal

“Experience teaches us that seven fat-fleshed, well-favoured kine—years of plenty—are generally followed by other seven, poor and very lean, ill-favoured kine—years of famine * * * * As a matter of fact, there has ever been an alternation of prosperity and dulness in trade.”

In the highly developed European countries, where surplus capital is latterly exported and invested in foreign undeveloped regions, the occurrence of industrial depressions is thus to a large extent avoided. In comparatively new capitalistic countries, however, such as the United States, where

duration of ten to twelve years. According to Mr. John Mills, above referred to, this cycle is divided as follows: After each panic or crisis, the first three years will witness diminishing trade, lack of employment, falling prices, a lowering rate of interest, and very considerable distress. Then there will be three years of active trade, slowly rising prices, fair employment, improving credit. Then will come three years of unduly excited trade, in which speculation will be rife, prices will rapidly rise, and an unusual number of new enterprises will be begun. The tenth year will be one of crisis, followed again by three years of depression.” *Ibid.*, p. 25.

there is still much room for development and a greater population, all capital is therefore invested at home, and as at times the supply of capital may run far ahead of labor, the possibility of industrial depressions is still present. The magnitude and intensity of depressions in this country, however, always have been and will be mitigated by the influx of immigrants.

CHAPTER III.

FINANCIAL PANICS

We have shown in the preceding chapter that a great excess of capital over labor is the cause of an industrial depression. This same condition is also the economic background of a panic, which is a financial phenomenon and brought about by an unscientific expansion of bank credit. It is caused not by a stringency of money, as is the actual apparent situation during a panic, but by an excess and ill apportionment of bank credit, due to the present lack of a clear and fundamental understanding of its mechanism and function.

This chapter presupposes throughout the condition of a constant or fixed supply of labor, and an excess of capital, as it is such

a condition, which, as we shall endeavor to show, constitutes the economic foundation for a financial panic as well as of an industrial depression.

1. Let us suppose that a certain community contains only four manufacturers, and one bank, each manufacturer receiving from this bank one thousand dollars a year of credit for the purchase of material and labor necessary to manufacture his end products, making a total of four thousand dollars a year of credit for the community. Now with no other change in the community taking place, the bank suddenly extends one thousand dollars of credit to a new factory, or fifth man. There is now five thousand dollars on the market bidding for four thousand dollars worth of goods and labor, and in conformity with the law of supply and demand the price of these goods and labor will rise to five thousand dollars. Each one of the four old manufacturers will now receive one fifth instead

of one fourth of the total material and labor on the market for his one thousand dollars, while one fifth of his factory capacity will necessarily remain idle as a result. It becomes apparent that no further expansion of credit would remedy this situation. For even if the bank should extend ten thousand dollars of credit to each manufacturer, prices and wages would rise correspondingly and the situation would remain unchanged.

The underlying causes of this new condition, however, being unknown, and due to the credit expansion¹ prices of labor and goods

¹"This preceding period is characterized by well-defined indications, * * * * a great expansion of discounts and loans, * * * * a material increase in wages * * * * difficulty in obtaining a sufficient number of laborers to meet the demand.

"An increase in prices, first, of special commodities, then in a less degree, of commodities generally ,etc." T. E. Burton, Crises and Depressions, pp. 51-52.

In European countries where the check system is not in vogue, the expansion of credit is accomplished by the emission of bills by such banks as the Bank of France, the Bank of England, the Reichsbank, etc., with identical effects.

including end products having risen accordingly, these manufacturers find that as material and labor mounted in price, their end products have also risen in price, (to a comparatively lower rate than wages because of competition,² resulting in a decrease of profits on the amount of goods manufactured) but that they are apparently unable to get enough money to buy enough material and labor to run their plants to full capacity, thus losing the profits, interest, and the principal on their idle and deteriorating capital. The competition for material and labor which follows the entry of the fifth man into the market results in an unlimited demand for

²In the preceding chapter under a discussion of exactly the same industrial conditions as outlined here it was concluded that wages rose while prices declined. Here it is stated that prices rise but wages rise relatively higher than prices. The two statements are obviously identical, except that owing to the concomitant financial inflation this relation of wages and prices is expressed in higher monetary figures, the same ratio in multiple numerator and denominator, which condition does not affect the real or relative substance of wages and prices.

money.³ The bank, to meet the emergency, extends all the credit possible until its limit is reached, but as pointed out above no remedy is afforded by this method. We have here a typical panic. The same result would obtain, if the bank instead of extending credit to a new manufacturer, had granted an additional one thousand dollars of credit to one of the four old manufacturers.

However, an extension of twelve hundred fifty dollars of credit instead of one thousand to each of the four old manufacturers only would not result in a panic, but would merely cause a temporary inflation of prices and wages.

2. We have thus far traced the effects of an expansion of credit to new capital for the purchase of material and labor for the production of consumable goods, resulting in a

³"During the crisis the characteristic feature is the inability to obtain credit, irrespective of the standing of the borrowers." T. E. Burton, *Crises and Depressions*, p. 60.

competition for the fixed supply of labor and material and a consequent unlimited demand for money. Let us now inquire into the effects of an extension of credit to build fixed capital goods. Suppose that the fifth man invests his one thousand dollars of the total of five thousand placed upon the books of the bank to the credit of himself and the four old manufacturers in the construction of fixed capital goods. He would therefore draw out one fifth of the total number of laborers and of the material on the market from the manufacture of consumable goods and into the building of fixed capital goods. Only four fifths of the amount of consumable goods formerly placed upon the market would now be produced. The five manufacturers pay their five thousand dollars in wages to their laborers, and for material, which is also labor, but these five thousand dollars are now received back only by the four manufacturers of consumable goods, and the latter

presenting this 'money' to the bank whom they owe only four thousand dollars, receive a balance in their favor of one thousand dollars. Now the fifth man owes the bank one thousand dollars represented by one thousand dollars worth of capital goods, and the bank owes the four other manufacturers one thousand dollars, or in other words the four manufacturers own the new one thousand dollars worth of capital.

Several things in this last case happened as a result of the banks additional one thousand dollars expansion of credit for investment in fixed capital goods. Wages rose from four thousand dollars to five thousand dollars. The price of consumable goods rose to five thousand dollars for an amount equal to only four fifths of what formerly cost only four thousand dollars. In other words wages have gone up but prices of goods mounted higher than wages, the difference between prices and wages being represented

by one thousand dollars worth of new capital goods that went to the manufacturers as an additional profit. Thus the extension of bank credit for the construction of fixed capital goods results in the diversion of labor and material from the production of consumable commodities and their conversion into privately owned capital⁴ at the expense of the public, (we say of the 'public', for while we have used the word 'laborers' in the last two paragraphs for convenience, the credit

⁴"One of the most serious promotives of crises in the the United States is the fact that so large a share of the capital required in manufacturing establishments and in other enterprizes is furnished by discounts obtained from banks instead of by permanent capital or by long-time loans or bonds. There is certainly an incongruity, to say the least, in providing by short-time discounts for the necessary capital employed from year to year, much of which is expended in buildings or permanent improvements. In proportion as these enterprizes depend upon short-time credits rather than upon paid-up capital or permanent loans, are they in danger of failure in time of stress. Any community in which enterprizes are maintained by an undue proportion of short-time credits must be in special danger of crisis; investments will be naturally multiplied." *Ibid.*, p. 263.

received from the bank for manufacture was really paid out in wages, salaries, professional incomes, interest, etc.) as an additional, unfounded, and gratuitous profit. Of more immediate and serious material importance than the ethical grievance caused by such a misdirection of bank credit is the diversion of material and labor from their regular and proper channels, which conduces to panic. While commercial banks, who are subject to immediate withdrawal of funds, by an over-indulgence in extension of bank credit for construction of fixed capital goods, which cannot be readily liquidated, place themselves in the positive and imminent danger of being compelled to close their doors, a common occurrence in time of panic. The use of bank credit for construction of capital goods is likely to take place on a large scale at about the time of a panic, which marks the conclusion of a long period of construction and expansion, when savings have been ex-

hausted and bank credit is called upon to complete unfinished projects.

Money for the purpose of building fixed capital goods must come exclusively from savings, which represent goods and labor on the market to be bought with this money and to be converted into capital goods. People who save do not consume all they produce, and thus release goods and labor for the construction of capital goods. Savings, therefore, do not compete with any other goods or labor on the market, as does an unscientific expansion of credit, which is not productive of any increase of goods and labor on the market, but merely forces a gratuitous relinquishment of part of their material and labor by old manufacturers to new ones,⁵ which is productive of panic, construction of privately owned capital at the expense of the public,

⁵The following is representative of the prevalent misconception of the nature of bank credit:

"The Abuse or Undue Extension of Credit, either by Excessive Bank Credits or by Inflated Issues of Currency.

and renders the banks indulging in such credit extension unsafe. The banks, through improper credit expansion, thus exercise a pernicious proprietorship over the public's possessions.

There is always a certain amount of goods and labor on the market representing the savings of the community, which is to be turned into fixed capital goods. There is also the normal supply of material and labor used entirely by the established industries and

"Credit is one means of obtaining control of capital, and thus promoting enterprize. Many pages have been written in support of the position that credit creates capital, or that it is itself capital.

"The general result of the use of credit is to provide for enterprizes by a greater number of persons, on a much larger scale, and with greater convenience. * * * *

"Bankers are frequently blamed as the responsible cause of crises * * * * Their critics find fault with them alike for bringing on the crisis by granting loans too freely, and for making it severe by refusing them * * * * They (the bankers) but reflect the good or bad times, which come without their behest, and the existence of which they must recognize." Ibid., pp. 100-103.

Compare this cosy satisfaction with the half-suspicions awakening in the first paragraph of footnote 4, ante. by the same author.

manufactories in the production of their end products. Now when the banks extend credit to new manufacturers for the purchase of intermediate goods and labor, or for the construction of fixed capital goods, a corresponding diminution in the supply of material and labor usually consumed by the old establishments takes place, with a resulting curtailment of their normal production, and loss of profits, interest, and principal on their idle and deteriorating capital. Cutthroat competition for labor and goods follows such an expansion of credit, wages and prices rise, but, as already explained in a preceding paragraph, no flood of money or inflation of credit can remedy this situation. The old manufacturers lose part of their normal and exclusive supply of labor and goods, and coupled with the decrease of profits on remaining production due to abnormal competition, strangulation of these industries takes place to a greater or lesser degree, the weaker ones

going down in bankruptcy. This inevitable result takes place after a most exciting situation on the market.

The economic foundation for a panic is therefore the great excess of capital over labor, which affords an opportunity to banks of extending credit to the excess capital in competition with the normal quota of industry. In other words in time of panic, bank credit furnishes the financial means for the desperate competition which is already engendered and actuated by an overcrowded and overburdened industrial condition, and its expansibility is forced to the utmost, accompanied by a universal cry for more money, in the false hope of thus affording relief from a most serious situation, which however is not financial but economic. The panic is thus the financial phase of that period of economic strife and mortal competition for survival in industry, marking the transition between a long era of prosperity, sav-

ings, construction, and overexpansion, and the period of industrial collapse, or depression.

The principles outlined in this chapter, as already noted, refer to a condition of a fixed supply of labor and an excess of capital. When, however, the situation is such that the increase of capital is accompanied by a corresponding increase of the population or labor to take up the higher level of production, the expansion of credit to include the new increment of capital is not productive of a panic, but is normal, performs its proper function of a mere medium of exchange, and causes no diversion of goods and labor. Although an intensive inflation of credit will at all times raise prices without causing a panic. While its extension for the purpose of construction of fixed capital goods is *always* commensurately productive of the effects described in this chapter. Panics thus at times occur without succeeding de-

pressions.⁶

In regard to the increasing of currency or other instruments of similar import during a panic in order to ameliorate its effects, it may be said that, while such action will not avert the immediately succeeding catastrophe

6“A crisis will be followed by a depression if it occurs contemporaneously with an exhaustion of resources and undue expansion of credit, and indicates the existence of actual cause for distress as distinguished from mere fright, or the apprehension of an unfavorable event which does not occur, or a derangement of the circulating medium, the effects of which may be only temporary. Those crises which are not so followed resolve themselves into mere temporary shocks, succeeded by prompt and almost complete recovery * * * * They are not without beneficial effect, because they check injudicious and extravagant enterprise and give warning of the danger of speculation.

“Crises, when followed by periods of depression, are part of a series of events, and the calamities which ensue are much more serious. They are like the bursting of a thunder cloud which precedes a storm. They are not only serious in themselves, but, in addition bring clearly to view the instability of existing business conditions. These conditions may have existed for a long time, but have escaped general recognition until brought to light by some notable event.” T. E. Burton, *Crises and Depressions*, pp. 20-21.

See also footnote 4, ante.

of an industrial depression, it may serve to delay its onset for a few days, and tends to assist in the survival of some of the fitter units in industry. For with the advent of excess capital competition for labor and material is inevitable in order to effect their more general distribution. The banks extend credit to the new manufacturers which in turn results in a proportionately greater demand for actual money. And if the supply of money should suddenly become inadequate and remain unalleviated it may of its own effect cause the immediate collapse of industrial units, which by reason of greater strength and resources might otherwise survive, and thus render the ensuing depression more severe.

CHAPTER IV.

DISTRIBUTION OF WEALTH

WAGES, INTEREST, AND PROFITS

The phrase "distribution of wealth" in economic writings refers to the apportionment of the income of a community among its several elements. These elements are divided fundamentally into two classes, viz., capitalists and laborers, owners of capital and land and their employes. The principles governing the division of the total material product of a community between these elements, or the determinants of wages, interest, and profits are the subject of discussion of this chapter.

The shares of distribution, like all matters economic, are said to be determined by rigid

natural laws which are incapable of modification by any human endeavor. Thus, for instance, the rate of interest is said to be fixed by the marginal productivity or utility of capital, and it can neither be increased nor reduced voluntarily. Wages is determined by the marginal productivity or utility of labor and it cannot be raised nor lowered by any human effort, such as strikes, voluntary readjustment, etc. Prices of goods express the marginal utility of products. This is the effect of the so called marginal productivity or utility theory of economics, which is capable of two interpretations.

One of these interpretations may be explained as follows. In the history of human production the first commodities made are applied to the most important uses. As more and more of these commodities are produced, they are applied progressively to less and less important uses. And the value of the least important use, the last use (the “marg-

inal utility''), to which a commodity is applied at any given time is said to determine the price of the commodity at that time. And, similarly, the value of the least important service rendered by capital, or its marginal utility, fixes the rate of interest, and the value of the least important service which labor performs, or its marginal utility, determines wages.

And it cannot be otherwise. For instance, if marginal workman Z does not wish to remain unemployed, he cannot expect to receive more pay than his marginal product is worth. And therefore all other employed workmen must accept the same wages as Z. For if employed worker C refuses he will exchange places with Z and himself remain unemployed. And if worker B should then decline he will be substituted with C, who had already accepted the inevitable, and remain unemployed in his turn, and so on. Marginal utility, therefore, determines prices,

interest, and wages.¹

Yet this interpretation of the theory is self-contradictory and self-destructive on its face. Marginal utility of commodities is an expression of the combined marginal utilities of

¹"Let us now return to the relation between the supply of an article and its price. Increase in supply means lower price. It also means lessening utility from the added units. The price of a commodity depends, as the case is commonly stated, on the least of the utilities yielded by the supply, or the final utility. Price or value, depends on the utility of the last increment." F. W. Taussig, *Principles of Economics*, Vol. I p. 126.

"The outcome is like that which we have found, in discussing the principles of value, as to the utility and the price of the several constituents in the supply of an enjoyable commodity. Though all the units of a supply sell in the market at the same price, not all have the same utility. There is such a thing as consumer's surplus. Similarly, though the return to the owners of all the constituents of capital is under free competition the same, the contribution from all to the community's well-being is not the same. Some remain more serviceable than others. And the difference in serviceableness shows itself in the same way as in the case of the utilities from enjoyable goods,—it affects consumer's surplus.

"A similar principle to that which underlies the theory of value thus underlies the theory of capital. Marginal utility determines the current value of commodities; marginal productivity determines the current rate of interest. There are utilities in goods (and services) great-

capital and labor. Since price is an expression only of the *marginal* utility of commodities, the supra-marginal utility of commodities (“consumer’s surplus”) goes to the consumer free of charge. And as the consumer comprises both laborers and capitalists, capital and labor together receive more than their combined marginal utility, in fact they receive the whole product. Labor benefits

er than at the margin. There are contributions from different forms of capital to the social income greater than at the margin. These surpluses the individual owner cannot keep; the community at large enjoys them in the form of consumer’s surplus.” Ibid., Vol. II, p. 10.

“The principle of marginal utility is here applicable under the guise of marginal efficiency or marginal indispensability. Consider, for example, the case of common unskilled labor. It is cheap because there is plenty of it. If there were very little of it it would be in the highest degree indispensable, and would be paid for at a corresponding rate. Being plentiful, it is applied not only to operations that are indispensable, but to others that are less and less needed, until finally its marginal application is reached at the point where it is least needed. * * * * It is its marginal efficiency that determines the pay which the whole must accept. * * * *

“The principle it is obvious, is essentially the same as that applied to capital: the contribution or addition which the marginal installment of capital makes to the output

from the supra-marginal utility of capital as well as of labor, and capital profits from the supra-marginal utility of labor as well as of capital. The ratio of the shares of capital and labor in production, or the determinants of interest and wages remain, therefore, as unknown as ever. The fault with this theory is evident. It is merely a play on words, a characteristic of many of the important theories in economics.

determines the return on all capital. Similarly, the marginal contribution from any grade or group of labor determines the remuneration of all within that grade. Both for capital and for groups of laborers this principle works out its results by a slow-moving but persistent and powerful process. The market variations of wages, the struggles and the debates of the day, seem to be carried on quite without regard to it. But the "fair" wages to which appeal is constantly made in current contentions are in reality the wages which this slow-moving process tends to bring about." Ibid., Vol. II, pp. 150-151.

"The principle as stated teaches that each tends to get the sum which represents the *marginal* significance of his services. It is possible that a given laborer may be supplying a service for which the buyer would be willing to pay \$10, though he only needs to pay \$2, because the latter sum expresses the *marginal* utility of this type of labor-service. This is, of course, the same principle that

The second interpretation of the marginal productivity theory is based on what is known as the law of diminishing returns. (a) There are two important stages in production,² known as the stage of constant returns, and the stage of diminishing returns. In the cultivation of any limited parcel of land, it is found that for a time the addition of equal units of labor results in equal additions of product, the same being true of the productivity of capital. This condition is termed the

we have in the case of ordinary goods, bread, meat, coffee, and so on. Whether ethically right or wrong there is nothing peculiar about it." F. M. Taylor, *Principles of Economics*, p. 348.

²There is another important stage, immediately preceding the stage of constant returns. In the cultivation of any limited parcel of land, the first application of successive equal units of capital and labor results in a progressively increasing additional product per every additional unit of capital and labor, i. e., the product of the last unit of capital and labor is always greater than the product of the preceding unit, and so on. This condition is termed the stage of "increasing returns," and is followed by the stage of constant returns. The principles discussed in the text under the stage of constant returns apply also to this stage.

stage of constant returns. A point, however, is reached in the exploitation of this piece of land when the product per every additional unit of labor decreases progressively with the increase of the number of labor units, and the same is also true of the productivity of capital. This condition is termed the stage of diminishing returns. And the natural principle involved is known as the law of diminishing returns. All other kinds of production, labor, and capital, than agricultural, as industrial and manufacturing, undergo the same stages. The stage of constant returns is followed by the stage of diminishing returns. In the former stage the product of additional units of capital and labor is constant. In the latter stage, natural resources remaining the same, a multiplication of units of labor results in diminishing marginal productivity of labor; natural resources, or labor (Capital may reach the stage of diminishing returns when limited by

labor while lands and natural resources are in the stage of constant returns for labor. For when the area of operation of capital is restricted by the supply of labor, by intensifying it will encounter the law of diminishing returns just as it would if its area of operation were limited by nature itself. The principle is identical. The supply of labor effects a limitation of land and natural resources for capital.) remaining the same, a multiplication of units of capital results in diminishing marginal productivity of capital. Now extend the limits of our parcel of land and natural resources to the national boundaries and these stages are national conditions. (Of course, the stage of diminishing returns is a very remote condition. When a country is new and sparsely settled it is in the stage of increasing returns. As the population grows and the country becomes very densely settled it passes through the stage of constant returns, and finally reaches the stage of dimi-

nishing returns.)

In the stage of diminishing returns, therefore, the marginal or last laborer produces the least product. And it is here asserted by the marginal productivity theory that the value of the product of this last or marginal worker constitutes his wages, and therefore the wages of all other workers, for he can be substituted for any one of them. And similarly the marginal productivity of capital determines interest, etc.³

(b) We may name the above the intensive branch of the law of diminishing returns, for there is also what may be called for convenience an extensive branch of that law. In

³"Abundant land makes rent low; abundant capital makes interest low; abundant labor makes wages low. This obviously results from the joint action of the principle of productivity and the law of diminishing returns. Each productive agent tends to get an amount equal in value to what the marginal member of his class produces. But, since the larger his class the smaller will be the product of the marginal member, therefore the larger his class the smaller the income which each member gets." F. M. Taylor, *Principles of Economics*, p. 347.

the cultivation of any country the good lands termed submarginal land are taken up first, and as the population grows the worse lands, the less and less productive or marginal lands are gradually taken up. Now as the product per unit of labor is less on the marginal lands than on the submarginal, wages of labor on all lands is said to be determined by the product of labor on the marginal or worst lands, etc.

In our discussion we shall treat the above two theories (a) and (b) as identical, corresponding the 'stage of constant returns' in (a) with the 'submarginal lands' in (b) and the 'stage of diminishing returns' in (a) with the 'marginal lands' in (b), as for our purposes they are one and the same, namely, the second interpretation of the marginal productivity theory. In the stage of constant returns, by definition, the marginal product of labor is equal to the submarginal product, i. e., the product of each of the last laborers

is equal to the product of each of the first laborers, as the progressive decrease due to the law of diminishing returns has not yet been reached. And the same is true of capital. Let us now examine the correctness of the second interpretation of the theory.

Taking up, first, the stage of constant returns, there are three possibilities with reference to the supply of capital. The supply may be greater than is necessary to furnish all labor, it may be just enough, or less. If it is greater or just enough there can be no interest, for competition of capital for labor will reduce interest to zero. If it is less the rate of interest must be equal to the difference between the combined product of capital and labor and the product of bare labor alone, for a laborer can then be hired for the value of the product of his bare labor.

Now the relative superiority of capital over bare labor is admittedly tremendous. And in order to obtain this interest in accordance

with the marginal productivity theory, it is necessary to keep a certain amount of labor operating without capital. In other words, capital must be confined and intensified to the last degree before it is extended as to include all labor. But such a confined intensification process is impossible while a different principle, speedy, inevitable, and destructive of all interest operates.

The law of diminishing returns, as we have already seen, becomes operative for capital when limited by labor as well as by land and natural resources. Thus workman A working with one unit of capital produces say ten units of product above his own remuneration. Assuming that the stage of diminishing returns begins with a second unit of capital, the addition of a second unit of capital to A would yield say only six additional units of product, instead of at least ten as the first unit does, while the addition of a third unit of capital only adds two units of product,

and so on. Having observed the action of the law of diminishing returns it becomes obvious that no second unit of capital will be allotted to A, who can produce only six additional units of product with it, when workman B is available who can produce ten units with it, while no third unit will be imparted to A who can produce with it only two additional units of goods, when workman C is available who can produce ten units. To illustrate this principle concretely: One will observe in China and India that the railroad locomotives are of the smallest, simplest, and most antiquated type. Thirty or forty of these could be purchased for the price of one big, latest, American engine. Yet the Chinese have no use for these improved locomotives, for the simple reason that they are not thirty or forty times as efficient as the simple kind, in fact they are not over three times as effective. The Chinese are making huge profits by investing in inferior engines. If a man

was to build a factory in China, he would install the simplest, most rudimentary machinery, instead of the latest complex machinery, with numerous minor devices, and auxiliary appliances. Rather than to pay ten times as much for the most elaborate machinery, which are not ten times as productive, he would build ten factories. In a country where there is no capital at all a man would not invest twenty thousand dollars in a steam shovel when he could buy ten thousand spades and set ten thousand laborers to work with them. His profits would be incomparably greater in the latter case than in the former. The comparative profits between a capitalistic and non-capitalistic country may run something like this: at six per cent interest on the steam shovel the income would be twelve hundred dollars per annum, while at only ten cents profit per day on each laborer (Assuming that the wages of a laborer is two dollars per day, ten cents is an extremely

modest profit from the standpoint of the marginal productivity theory that labor and capital receive as remuneration their own respective marginal contributions to product, as the product of the laborer working with bare hands would probably be less than one-tenth as much as when working with a spade, and the actual relative productivities of all forms of capital are the prime consideration in communal investment.) the income would be one thousand dollars per day.* (But, and the

*An ax or a spade which took an old-fashioned blacksmith say one day to make performed three hundred days' work a year, each day's work being of the same value as the ax or the spade, making a return on the investment of 30,000%. Do modern machinery show such returns? The total product of all manufacturing enterprises in the United States in 1909 was about 115% of the invested capital (See Part III, this chapter).

The human can provide for his needs with the simplest of tools. The old-fashioned tailor needed only a needle, tape, and shears; the shoemaker required a needle, ole, and hammer; the furniture maker a saw, hammer, and plane, etc. The productiveness of these simple tools runs into tens of thousands of per cent. And before any investment is made in any highly modern machinery these elementary tools are provided, as well as higher intermediate tools, for the same principle (the law of diminishing returns) operates all the way up the scale of intensification.

principle applies to all foregoing illustrations, in a country where there is so much capital that nearly all laborers are supplied with steam shovels, except, of course, under conditions where mobile labor with simple tools is more advantageous than unwieldy machinery, a man with a steam shovel can do more work than a man with spade, and thus give remuneration to available capital.) In other words, the marginal product of capital decreases progressively with increasing intensification,⁴ and vice versa. It is apparent, therefore, that in any civilized community the nature of capital is to dilute into the thinnest layer, as it were, necessary, and spread lightning-like at a point of highest produc-

⁴"The productiveness of capital goods in the marginal uses to which capital is put will * * * be lessened by these changes. The forms of capital goods which it now pays to use are less needed. They add less to the product of industry and those who supply them must be content with less interest. But if interest falls at one point it must, for reasons already explained, fall over the entire industrial field before adjustment is complete. H. R. Seager, *Principles of Economics*, p. 280.

tivity so as always to include all labor, and thus automatically and paradoxically abolish interest. If one must have a name, we may term this principle the Law of the Diffusion of Capital. Natural interest is therefore impossible. And the present existing interest is therefore not determined by the productivity of capital, marginal, or other. And consequently, neither is wages determined by the productivity of labor.

Theoretically, then, all labor is always furnished with capital regardless of the limited total supply of capital, as it must attenuate to the thinnest stratum necessary as to cover all labor. As to the availability and prolificness of capital in general, however, and the probability of its supplying all labor even in a most intensified state, it is sufficient to note the facts: That Japan within thirty years rose from a primitive order to a most highly modern and capitalistic state; that the vast capital of the United States doubled itself

within the ten years from 1900 to 1910, while the population increased only twenty one per cent; that the European countries have been investing vast amounts of surplus capital in foreign continents; that during the first three years of the late European war, before the entry of the United States as a belligerent, there has been a serious and widely advertized shortage of labor to meet the demands of existing capital in this country; and that after declaration of war by the United States, the government, within a period of twenty months, raised thirty billions of dollars in 'liberty loans', while the total capital in this country invested in manufacture in 1910 was only eighteen billions (for labor to have kept pace with such an expansion of invested capital the population should have trebled in twenty months), a most eloquent indication of the presence of capital more than sufficient to meet all needs. (See Chapter II, footnote 2.)

To construct a science of economics based upon the precarious possibility of there being somewhere a handful of refugee laborers still operating without necessary capital, upon whose wretched souls devolves the enormous responsibility and fate of the entire capital and labor of this mighty nation, without ever being uneasy of the possibility of capital at some time catching up with these few laborers, and like a bolt from a clear sky suddenly revolutionizing the affairs of men by transferring the entire income of capital to labor, impoverishing the rich, and enriching the poor, and above all of the necessity for doctrinaires of immediately writing up a new system of economics, is the height of folly. An unparalleled opportunity was afforded capital to overtake labor when five million young men left industry to join the colors. Did any one feel the shock of the revolution? Did any one hear of the sudden disappearance of interest, etc. etc.? And if there are

such laborers anywhere, who voluntarily defy the call of the times, or are inaccessible to capital for other reasons, they are not in competition with labor.

The existence of intensified capital in civilized countries and so abundantly,⁵ and the low rate of interest⁶ are proof that extensi-

⁵When capital is intensified in any industrial or manufacturing unit or units, so that it has passed the point of diminishing returns, i. e., the last units of capital produce less than the first, it indicates that all labor is already employed, and under the highest productive conditions, or the marginal units of capital would employ labor if it was available under supra-marginal conditions.

⁶"On the whole it is not too much to say that the efficiency of labor in manufacturing has been increased by many hundredfold by the abandonment of isolated production and hand processes in favor of the division of labor and machinery." H. R. Seager, *Principles of Economics*, p. 158.

The total capital invested in manufacture in the United States in 1909 was eighteen billion dollars. The number of workmen employed by this capital was about six million. This represents an investment of about three thousand dollars of capital per laborer, which at six per cent. brought a net return to capital of one hundred eighty dollars per annum per laborer, while the average wage in that year was about five hundred dollars per annum. What then became of that increased efficiency of labor "many hundredfold" due to capital? We shall account for this discrepancy before the end of this chapter.

fication had already taken place, which is a very early process automatically and rapidly accomplished. To make out a case for natural interest, and therefore natural wages in the face of the principle of the diffusion of capital, its prolific nature, and abundance in civilized communities is apparently a hopeless task, and embodies the conclusion that labor does not profit at all by capital, by invention, by the high productiveness of modern machinery, etc. but forever remains in the same condition as in a primitive order.

The Law of the Diffusion of Capital operates also in the stage of diminishing returns. If extensification of capital is more productive than intensification in the stage of constant returns it is equally so in the stage of diminishing returns. Capital is extensified completely (i. e. all available labor is employed) before intensification takes place, or capital would here undergo double diminishing returns, one due to limitation of natural

resources, and the other to limitation of labor. That is, in the stage of diminishing returns, capital, owing to its restricted space of operation when limited by labor, by intensifying will encounter a higher degree of diminishing returns than by extensifying, say it will strike the fifth step of diminishing returns in the former case when it would only strike the second step in the latter case, just as a certain amount of capital will reach the stage of diminishing returns on a small plot of land while it wouldn't on a larger space of land. In other words, land and natural resources being further restricted by labor diminishing returns for capital will be more intense than when not so restricted. To illustrate this point further, suppose the stage of diminishing returns had just been touched, and the first step of diminishing returns shows a very slight decrease of product from the last step of constant returns, and that there is a vast, highly productive sphere of

exploitation remaining but in a stage of gradually and slowly decreasing returns. Suppose that at this point extensification of capital as to include additional labor ceases, and intensification immediately begins. The law of diminishing returns as operative for capital when limited by labor would soon reduce the marginal product of capital to the last point, or practically nil. Suppose now, when this point is reached, some of the marginal intensified capital were suddenly extensified, the marginal productivity of the extensified capital would immediately jump enormously from zero, its former point. The total product of all the capital would therefore be greater now than before the extensification. The productive advantage of extensified capital over intensified holds true for any fraction as well as for the whole (the elementary tools being the most productive relative to their value). We see then that the marginal productivity of capital declines more rapidly

under intensification than under extensification. The slightest degree of intensification is a loss against corresponding extensification. As to 'submarginal lands' and 'marginal lands', labor and capital would not move from submarginal to marginal lands until their combined marginal productivity on submarginal lands was equal to or less than it would be on marginal lands, and then the principle of extensification would become effective on marginal lands. In the stage of diminishing returns, therefore, as in that of constant returns, intensification of capital cannot take place before extensification in the most attenuated form. And the principle of the diffusion of capital as presented under the discussion of constant returns that all labor is always supplied with capital regardless of its limited total amount, and that consequently there can be no natural interest and wages as maintained by the marginal productivity theory also holds true of the stage of

diminishing returns.⁷

The stage of diminishing returns in lands and natural resources is one, however, that has not yet been reached in the history of the world. It is a stage that cannot be reached in or confined to any single country no matter how thickly populated, but it must be a world condition. For raw materials are shipped from as yet slightly exploited continents rich with latent natural resources to densely populated manufacturing countries for the manufacture of end products. It is a con-

⁷The Law of the Diffusion of Capital applies also to the stage of increasing returns for the following reasons. (1) Intensification of machinery with a fixed supply of labor requires more work and attention which cannot be given commensurately, resulting in progressively increasing loss with increasing intensification as against extensification. (2) The law of diminishing returns operates subjectively with regard to machinery as well as objectively with regard to natural resources; the *subjective* efficiency of machinery increases in lessening proportion with increasing intensification. Space does not permit to discuss this principle more fully here. (3) The compactness of intensified machinery confines its operation to a very small space and thus practically obliterates the differences between the various stages, the law of diminishing returns becoming effective almost at the beginning of intensification. Extensification before intensification is therefore also the law of the stage of increasing returns.

dition of the remote future, one which does not now exist, and any principles it may involve cannot be made applicable to past or present conditions, and are, therefore, not to be considered in the study of economics of the past, present, and yet distant future. But as we have already shown in the preceding paragraph, the marginal productivity theory does not determine relative wages and interest even in the remote condition of the stage of diminishing returns.

Some economists⁸ maintain that wages is determined by the supply and demand of labor. But that is not true. An increase of labor increases the supply of commodities and correspondingly increases the demand for commodities. To the extent of their wages the additional laborers buy their part of the additional product, and with the profits employers buy the balance of the additional

⁸One F. A. Fetter, and others.

product. (For the benefit of the average reader it must be remarked that a person cannot avoid spending all of his money directly or indirectly; either he spends it himself, or by putting it in the bank the latter spends it for him.) The value of commodities and therefore of labor cannot rise or fall if an increase in the supply of commodities is accompanied by a corresponding increase in the demand. The equilibrium of value is maintained. The same is true of interest.

We see, then, that the existing interest and wages are not determined by the productivities, marginal or other, of capital and labor respectively; that the law of supply and demand, the determinant of value in economics, does not apply to or affect wages and interest. These factors of the distribution of wealth, therefore, are not determined by rigid natural economic laws, as contended by the economists.

We have shown that interest or wages can-

not be determined by any automatic natural laws. The conclusion, therefore, necessarily following is that these factors of distribution are determined arbitrarily. There is the customary, immemorial, permanent, and legally sanctioned rate of six per cent. interest, slightly modified here and there in isolated cases by particular, individual, and personal circumstances. An instance came to the attention of the writer, where a mortgage debt, payment of which was enforceable one year after its creation drew a uniform rate of six per cent. interest for a period of seventy eight years covering the epoch of the greatest capitalistic activity and development in history.

Wages are determined on the principle of a livelihood. Workers receive a living wage of a certain standard throughout the country. It may vary somewhat between localities, but these slight local variations of wages correspond with local variations of prices of

the means of subsistence, while the real net wage is the same throughout. Wages of skilled labor is usually higher than that of unskilled labor as an inducement for the abler workmen to engage in the skilled trades. This bonus is not in commensuration with relative values of various services, as a comparatively small bonus will practically sift out all the workers who can qualify for it as much as a very large bonus, just as a ten dollar prize for the best composition in the class room will bring forth the best composition without expressing its real intrinsic value. Greater efficiency and productiveness of individual workers is encouraged and rewarded by more pay but not higher pay. Wages of the various trades tend to become standardized as much by the workers themselves as by the employers, thus a union, fearing that its members may receive less than a certain scale of compensation, fixes the rate, and thereby precludes the necessity of bargain-

ing and the possibility of obtaining higher pay. Increases of wages come through the impulsion of the labor unions, and sometimes spontaneously in anticipation of such impulsion. Once natural wages and interest are excluded by the principle of the diffusion of capital, the whole scheme of distribution must become arbitrary if there is to be any interest and profits. The determination of wages is effected conjointly by the standard of living maintained and enforced by labor, and by the mandates of capital. The surplus product above wages goes to capital as salaries of high officials, interest, and profits. (The comparative importance of profit and interest is shown by the census statistics of 1910. On a total capital of eighteen billions invested in manufacture in the United States profits were fourteen billions, while interest at a high average rate of six per cent on eighteen billions was only slightly over one billion.)

According to orthodox economic doctrine there can be no profits. For wages are determined by the marginal productivity or utility of labor, and interest by the marginal productivity or utility of capital. And as price of commodities is an expression of the combined marginal productivities or utilities of labor and capital, only, there is no profit left. And if price also includes profits, then wages and interest are not determined by the marginal productivities or utilities of labor and capital, for wages and interest cannot then buy the entire marginal product of labor and capital. By maintaining then the existence of profits, the economists place themselves in the dilemma of *ipso facto* denying the determination of wages and interest by their respective marginal productivities or utilities, or the marginal productivity or utility theory, and by denying the existence of profits, they would apparently contradict a familiar fact, which under any circumstances

invalidates the marginal productivity or utility theory. In our exposition of the determination of wages and interest there is a definite surplus left as profits.

Rent is the profit of land after deducting wages, and interest on the attached capital. In a newly settled region where there is much unoccupied and unowned land, land has no sale value, i. e., land itself has no price and may be obtained free (although it brings high profits or rent above wages and interest), and a going farm would sell only for the value of the attached capital. (Of course, a laborer can take up land for cultivation by himself and receive the rent above interest for attached capital and his own wages himself, but so can he in industry generally if he has the managing ability, and the confidence of the community to be intrusted with capital.) But when all land becomes occupied and owned the value or sale price of land is the capitalization of its profits at the current

rate of interest. Better grades of land being more productive per unit of capital and labor bring a higher return of rent and their sale price is correspondingly higher. The rent of city sites is determined by the demand in the various sections of a city after deducting interest on attached houses and buildings, and other expenses, and cannot fall below rent of farm land or it would be so used.

DISTRIBUTION OF WEALTH

II.

It was found in the foregoing discussion that wages is determined arbitrarily. That is, its fixation is dependent upon purely human volition within the wide and absolute limits of bare subsistence and the total value or price of the product. Under such a condition wages is scientifically capable of determination by either factor exclusively, capital or labor, or both. The manner of determination, owing to the diametrically opposed interests involved, resolves itself quite naturally into a contest of strategic ability between capital and labor, a process in continuous operation in the industrial world.

From the vantage point of labor, the regu-

lation of wages takes place in the following manner. If a worker making say ten pairs of shoes per week, receives four pairs as his wages, while six pairs go to capital, he may by a successful strike obtain six pairs of shoes as his wages, while only four pairs would then remain as capital's share, and so on, and no adverse circumvention or manipulation could alter the result.

The question then remains as to the effect the use of money as a medium of exchange of commodities and labor may have upon the validity and reality of a monetary increase of wages. It is popularly conceived as well as in academic circles, that if capital increases wages it can and therefore usually does nullify the increase of wages by raising the prices of its products.⁹ Such a pro-

⁹"It (the union) sees also that if the unions force a wage higher than a fair and open market affords, this is rarely done at the expense of the employer; that in the long run it is at the expense of the purchasing public itself, including the unprivileged workmen." F. A. Fetter, *Modern Economic Problems*, Vol. II p. 312.

ceeding would of course be impossible in the example given above, where labor should receive as wages a portion of the products themselves that they make. But is it possible when wages is paid in the common medium of money? It is well to divide the discussion of this point into two categories, namely: when wages are equally raised in all industries; and when the increase of wages takes place in only a portion of all industries.

1. When wages are raised in all industries, the increase is a real one and cannot be offset by raising the prices of goods, for prices of commodities cannot be raised voluntarily. To begin with, let us find out exactly just what the idea of arbitrarily raising prices implies. The standard monetary unit, or dollar of the United States is composed of 25.8 grains of gold, nine-tenths fine, which determines its value. That is the exchange value or purchasing power of a dollar is no more nor less than the exchange value of the

25.8 grains of gold it contains.¹⁰ Now gold is a useful commodity just like any other good on the market whose value is determined by supply and demand. To say that

¹⁰"Hence it may be said that the value of any standard money depends upon its utility for this and other purposes combined and is measured by the demand for those purposes. * * * *

All trade is barter, or the exchange of property and service for other property and service. This is true when wheat is exchanged for gold, and gold for cloth. Here are two acts of barter to accomplish one result, namely the procuring of cloth for wheat. The word "barter" is commonly used to signify the exchange of property without the use of money. It must be borne in mind, however, that all trade is barter, even when the precious metals are employed as intermediaries—the latter being articles of barter also, and possessing the same value as the things for which they are exchanged. *The whole science of money hinges on this fact.*

It is not absolutely necessary that the substance used as money should be coined. Gold and silver were used as money before they were coined—and then they passed by weight. All that coining does is to save trouble of frequently weighing and assaying * * * *

Money is a common measure of value, a medium of exchange, and a standard of deferred payments. Like most other commodities it is the product of labor. Any portable article may answer the purpose of money; some commodities are more convenient than others. Mankind has experimented with many different ones, and has selected gold as the best * * * *

to-day twice as much gold or money should be paid for all other commodities on the market as yesterday is exactly like saying that henceforth twice as much wheat should be given in exchange for all other commodities as formerly, or that a certain group of commodities shall hereafter have half or double their former exchange value. Such a thing is impossible, and could not even be enforced by law. The relative values of commodities are rigidly determined by their relative supplies and demands. Only through natural causes affecting the supply and demand of any commodity, including gold, is its value or price altered. The values or prices of commodities are measured in terms

The value of any standard money depends upon its utility or *usefulness*, i. e., upon what the consumers of the commodity are willing to pay for it for other than monetary uses * * * *

In every exchange the gold is of the same value as the thing for which it is exchanged.

All of our paper circulating medium and all of our smaller coins are, either directly or indirectly, promises to pay money." Horace White, Money and Banking, Chap. I.

of gold (money) and are not affected by the proportion of shares received by capital and labor. Thus if an article is worth three grains of gold, no more nor less, it makes no difference in its value or price whether labor receives one grain of the gold and capital two, or labor receives two grains and capital only one. Reapportionments of the shares of capital and labor are internal and not external, within price and not outside of it. The sum of their shares, from the nature of things, can never exceed the whole product, or price. And so an increase of wages in all industries means that the values and prices of all commodities remain the same as before, but that labor receives a greater share of their values than hitherto, and capital a correspondingly lesser portion. (For a complete proof of this point see Chapter V. Value and Price, post).

2. Is there any difference in the substantiality of an increase of wages granted to

a limited class or portion of labor only? Suppose wages had been increased in a single factory or several factories. These factories will not be able to raise the prices of their commodities to make good the wage increase, for competition of the other factories making the same goods where wages had not risen will not permit it. People will not pay higher prices for the same goods to one person than to another. Prices then of individual factories, as universal prices, cannot be raised in consequence of an increase of wages.

There is what may at first glance seem to be an exception to the general rule that prices of commodities cannot be raised to compensate for increased wages. We have said that gold has a certain market value which cannot be altered voluntarily. But we must here present the only exception to the general rule that prices cannot be determined voluntarily. The price of a specific commodity may be fixed arbitrarily on the mono-

poly principle. Where a certain commodity is entirely controlled by a single interest to the exclusion of all competition, the price of that article can be set arbitrarily without regard to its natural specific value under competitive conditions of supply and demand. This proceeds on the same principle as, that while in the city where there is competition the value of a loaf of bread is say ten cents, in the desert it may be bought for a hundred dollars by any one who stands in need of it. In the desert the price of the loaf of bread was determined without reference to its natural specific value in any competitive community. Such a monopoly may be effected in any particular trade or industry by labor through the means of the closed shop and the enforcement of a certain high scale of wages, which make it unprofitable compared to other industries, or impossible to produce or sell the particular commodity at a price which makes no allowance for the higher rate

of wages. (Labor monopoly differs from capitalistic monopoly in that the latter eliminates competition in prices altogether while the former leaves a margin of price competition above wages. We shall have occasion to discuss capitalistic monopoly further on.)

Supposing, then, wages in the whole of a certain industry had been raised, could the manufacturers of this industry voluntarily raise prices to compensate for the increase of wages? If prices were so raised demand for the commodity would fall off and competition of the manufacturers to sell their goods would reduce price to original level. Price, therefore, cannot be raised arbitrarily. On the other hand if price remained at original level profits in this industry would be less than in other industries. Consequently there would follow a movement of capital and labor from this industry into others where profits are greater, supply of the commodity would decrease and price, through gradual with-

drawal of capital and labor, would gradually rise to the point where increase of wages is compensated for, and profits are equal to the general plane of other industries. An increase of wages in the whole of a particular industry on the labor monopoly principle ultimately results then in a corresponding increase of price of the particular commodity. The increase of price is effected not voluntarily but through a defection of capital and labor, and consequent decrease of the supply of the commodity.

But we have so far presented only one side of the question. As capital and labor gradually withdraw from this industry, supply of the commodity decreases, and price gradually rises, but as this withdrawn capital and labor enter a different industry and produce a different commodity, supply of the latter commodity correspondingly increases, and its price falls in exact inverse ratio to the rise of price of the first commodity. Thus what

labor loses by an increase of price on one commodity it gains by a corresponding cheapening of other commodities. An increase of wages can therefore never be nullified, and is entirely real. The corresponding loss to capital, at first borne by the capital immediately concerned, finally distributes itself over the entire industrial field through movements of capital in all directions until universal proportionality of production is attained, and universal equalization of profits (decreased level) restored.

The same principles apply to new capital. If it chooses the industries where wages rose, it will pay higher wages and receive higher prices, and 'if it chooses industries where wages did not rise it will pay lower wages and receive lower prices. Profits are equalized and there is a uniformly decreased level of profits.

The principles discussed in this section (2) are based on the assumption that capital is

perfectly mobile. Specialized capital, however, is practically immobile. But this does not affect the outcome as regards the reality of an increase of wages. The wage increase will be borne relatively by the industries directly affected and by other industries through lowered prices in proportion to the mobility of capital. If the mobility is great supply of the affected commodities will greatly decrease and their price will rise high, while the increase of other commodities will be correspondingly great and prices will fall low. And if the mobility of capital is small supply of the affected commodities will decrease little and prices will rise little. while the supply of other commodities will increase correspondingly little and prices fall little. The mobility of capital affects only the proportional distribution of the burden of increased wages among all capital. (Perfect distribution is also aided by new capital.) The proposition that prices of other com-

modities fall in exact inverse ratio to the rise of prices of the affected commodities remains constant, and the wage increase remains real.

(The increase of price of a particular commodity by virtue of the labor monopoly principle, unlike capitalistic monopoly, is only temporary, until wage increase becomes general. For as wages are raised generally the profits of capital are universally decreased (Prices cannot be raised universally to compensate for increased wages. Section 1.) while the profits in the particular industry remain the same. There would then follow a movement of capital and labor from other industries into the particular one until profits in the latter were reduced to the decreased common level, and price of the commodity restored to its original level before its wage increase.)

An increase of wages, in whatsoever manner effected is, therefore, a valid, real, and corresponding increase in the income of

labor. There are three factors, however, which tend to decrease actual wages, if not nominal, namely: a relative increase in the supply of gold which reduces actual wages by raising the prices of all commodities;¹¹ an inflation of government currency; and an inflation of bank credit. The third factor, however, when not based on an increased supply of gold, or inflation of government currency, is a temporary condition, as the medium of exchange immediately tends to resume normal proportions and the value of the gold dollar soon reasserts itself.

The second factor is also a temporary condition. An inflation of the currency automatically brings about its own deflation. For as currency is increased beyond the need of mere medium of exchange its value falls below the gold standard, and the government gold reserve for the redemption of currency is soon depleted. And in order to conserve

¹¹See Chapter V. Value and Price, post.

the gold reserve and keep from changing to a paper standard¹² the government is compelled to deflate the currency.¹³ An inflation of the currency beyond the need of medium of exchange is thus indicated by great demands on the government gold reserve and to prevent its depletion the government immediately decreases the supply of currency until the outflow of gold ceases, when currency becomes of equal value with gold.¹⁴

The stock of *money*, viz., gold coin, currency, and bank credit, regulates itself automatically in keeping with the true value of the gold dollar.

¹²See "Gresham's Law," a similar principle, in any textbook of economics.

¹³When the currency in circulation in this country was about \$3,000,000,000 the gold reserve in the United States Treasury for the redemption of currency to keep it at par was only \$150,000,000, a sum that is easily exhausted when a marked discrepancy between the value of currency and gold arises.

¹⁴The co-existence of the inflated currency and the gold reserve at the present time (1920) in the United States is an anomaly and is due to the great increase of the supply of gold in this country, because of abnormal

There remains, therefore, one permanent factor which may affect wages through changes of price level, viz., the first factor, variation in the relative supply of gold and consequent change of the value of the gold dollar. When wages are decreased by an increase in the relative supply of gold the fact is indicated, of course, by a rise of the

exportation of this metal from Europe to the United States during and after the war. This exportation of gold to the United States was and is caused by the facts: that the great currency inflation in Europe released gold from their circulation which was consequently exported to the United States as a commodity for use in the arts, this sort of exportation being aided by the decreased demand for the metal as a commodity in Europe owing to the general impoverished condition of the European population; and the exportation of gold to the United States in great quantities during the war in payment of imports at a time when there was no balance of European exports. These conditions greatly augmented the supply of gold in the United States, cheapened the metal here, correspondingly raised the prices of commodities, and consequently forced the government to increase the supply of currency in order to meet the needs of commerce, as practically twice as much money must now be paid for commodities as formerly. The present increased supply of currency in this country is, therefore, in reality not an inflation of the currency. But the situation, of course, is abnormal, and

general price level, and vice versa. For many reasons, which space does not permit to discuss here, the value of gold in normal times remains practically constant.

brought about by the upheavals of the late war. This situation will rectify itself when export of commodities from Europe to this country increases, and import of gold by Europe from this country increases. It is not to be expected, however, that imports of gold by Europe will increase appreciably as long as they maintain their inflated currency, and it is a matter of expediency for them to retain the inflated currency as they can thereby pay off their war debts more rapidly. Prices will, therefore, remain high in this country indefinitely.

DISTRIBUTION OF WEALTH

III.

How can the profit percentage of modern industrial organizations be ascertained? When a factory is owned by an individual or partnership the process is comparatively simple. Cost of production, interest on capital are deducted from the gross proceeds and the remainder is profits, its percentage on the capital is then readily computed. In the case of corporations, however, determination is not so easy a matter. When a new corporation is organizing it sells shares of stock to the public, and with the proceeds it builds plants, etc. The price which a new corporation charges for a share of stock is of no material importance to the purchaser. If the price is high the corporation will only need

to issue a small number of shares to raise the required capital. If it sets a low price it will have to issue a correspondingly greater number of shares to obtain the requisite capital. It can raise the necessary amount of capital either way. It merely divides its total stock issue into small or large units. And when profits are finally made the dividend percentage per dollar invested will be the same in either case. Usually corporations set a low price for stock in order to attract the small investor. The price level of the stock of a new corporation in the process of organization is therefore immaterial.

Corporations also designate a nominal par value to their shares, usually \$100.00. This par value of a share of stock is also without any significance whatever. It bears no relation to the price at which the corporation sells its shares. It may sell the stock at one dollar a share or one thousand dollars a share, while the par value may be fixed at any

imaginary figure, or there may be no par value at all, without the least effect. For the corporation does not obligate itself to buy back or redeem the stock at its par, or for any amount whatsoever, on demand or at any future time. Neither does it bind itself to pay any interest at whatsoever rate, except to divide the profits it may happen to make equally among all shares. If the corporation makes no profits, it owes no interest on stock as it does, for instance, on a mortgage. We see then that the par value of a share is an empty and meaningless designation. Yet it serves some collateral purposes: It forms the mathematical basis upon which dividend percentages are computed; and also has a more profound end which we shall presently discover.

Let us now analyze the following commonplace announcement which we daily see in the newspapers: "So and So Company declared its quarterly dividend of $1\frac{1}{4}\%$ ".

This means an annual dividend of 5% on a par value of \$100.00. Now 5% were indeed a modest, fair, most justifiable, to say the least, return on capital. But what relation does this 5% on a par value of \$100.00 bear to the actual capital invested? The company may originally have sold its shares of stock at \$10, a usual price. The 5% dividend on a par value of \$100 now becomes a 50% dividend on \$10, the amount of capital actually invested in the corporation represented by a share. Now when a new corporation organizes, the promoters and organizers retain a controlling interest or 51% of the stock issued, plus a large cash bonus, for their services. The 5% dividend now stands for a 100% dividend on the total amount of capital actually invested. Furthermore, large amounts of common stock are distributed gratis as bonuses to purchasers of mortgage bonds, preferred stock, holders of common stock, for imaginary services, etc. In Wall

Street language it is "watered." And it is a conservative estimate that half of the remaining stock is "water." The 5% dividend now becomes a 200% dividend on the total amount of capital actually invested. When we consider the variable factors, viz., the original price of the shares, the "water", etc., a 5% dividend may stand for an actual dividend of from 200% to 1000%. In other words the annual profits of a corporation may equal from two to ten times the amount of capital invested by its stockholders. (Of course, the original bona fide purchaser of a share of stock at \$10, who receives a 5% dividend on a par value of \$100, gets an actual dividend of only 50%. But three quarters of the outstanding stock drawing dividends were never paid for, so that the total dividend amounts to 200% of the capital actually invested, as already shown.)

The above is a hypothetical illustration. How does it compare with average profits as

shown by statistics? In 1909, the total capital invested in manufacture in the United States was \$18,000,000,000; the total number of wage earners employed by this capital 6,000,000; the average wage \$500 per annum, total wages \$3,000,000,000; the total value of finished products \$21,000,000,000. Let us now find the profits: Subtracting three billions for repairs and depreciation (a most liberal allowance providing for complete renewal of capital from ground up, buildings and equipment, every six years) from the gross product of twenty one billions we have a remaining net product of eighteen billions; subtracting three billions of wages from the net product we have a remainder of fifteen billions; deducting 6% interest on eighteen billions of capital, or about one billion, from the remainder, we have left fourteen billions as profits on a capital of eighteen billions, or 77%. But it does not stop here. When a new corporation is organizing it obtains

say one million dollars through stock subscriptions, which it uses to build a one million dollar factory building. It then obtains a one million dollar mortgage and installs one million dollars worth of equipment. The mortgage, of course, is on both the building and equipment and is therefore perfectly secure, amounting to only fifty per cent of the total value of the property. It is safe to say that one half of the eighteen billions of capital was obtained by mortgage. The total capital therefore invested by the stockholders was only nine billions, upon which they received a profit of fourteen billions, or 155% which is the profit of capital. (The interest on nine billion mortgages was already covered when we subtracted 6% interest on the eighteen billions of capital, thereby also allowing stockholders interest on their own capital in addition to the 155% of profits.) Nor does it even stop here. For corporations apply part of their large profits

to increasing their plants, expansion, etc., so that the stockholders' investment is even less than nine billions, and their profits more than 155%. But we shall not delve deeper. In terms of product, the total returns to capital, interest and profits, is equal to five-sixths of the net product, while the return to labor is one-sixth of the net product. Whereas, if the total returns to capital were only about 5% or 6%, or about one billion dollars, as it appears to be on the surface (dividend announcements), it would amount to only one-eighteenth of the net product instead of five-sixths, while wages would then be seventeen-eighteenths of the net product instead of one-sixth.

The income of capital thus consists of two forms, viz., *interest* and *profits*. *Interest* is a stipulated rate of compensation for loans of money or capital, secured by mortgage, bonds, notes, oral promises, etc. The specified rate of compensation becomes a debt as

well as the principal. *Dividends*, as we have already seen, is the corporate form of *profits*.

Stocks of corporations which had been paying dividends regularly for a number of years acquire a "market value," which tends to approximate the capitalization of the dividend rate at the normal rate of interest. They thus become substantially an *interest* bearing security selling at a commensurate market value regardless of the facts: that they were originally mostly obtained gratis; or sold at a very low initial price; or that the actual capital in the corporation above the mortgage debt which they represent (or originally represented before the "good will" was capitalized at the profit rate) is insignificant as compared to their market value.

There are two causes which make for inequality of profits in different manufacturing units of the same line of production:

1. Some concerns may have gained the

advantages of large scale production, better machinery, better methods, greater efficiency, etc. to a higher degree than others, and produce commodities at a lesser expense and correspondingly higher profits.

2. Owing to the more rapid increase of capital than population there is a continuous accession of excess capital and a consequent continuous undercurrent of liquidation, the industrial safety valve. These bankruptcies are due to competition for the market of excessive capital, the weaker and newer units with weaker foundations and selling organizations being submerged. There is no noticeable, if any, special competition in prices, as supply of commodities does not increase faster than population, and demand grows with it, so that prices gravitate about a normal level. The failures are due not to small profits per sale but to lack of sales, or business, because of excessive capital, and naturally the weakest units are forced out of the

market. This is the same principle underlying industrial depressions but in a slight imperceptible form.¹⁵

¹⁵During the period of prosperity and expansion many projects being successively completed cause this continuous undercurrent of liquidation, while the majority of great enterprizes, whose promotion and construction extend over several years, reaching completion at about the same time precipitate a crisis; intense competition for labor and in prices in order to gain the market; universal strife for survival; and an industrial depression, as discussed in Chapter II.

CHAPTER V.

VALUE AND PRICE

From the standpoint of production goods on the market are divided into five classes, namely, "increasing returns," (or "diminishing cost") "constant returns", (or "constant cost") "diminishing returns", (or "increasing cost") "limited supply", and "monopoly."

In the history of the cultivation of any limited parcel of land, the first application of successive equal units of capital and labor results in a progressively increasing additional product per every additional unit of capital and labor, i. e., the product of the last unit of capital and labor is always greater than the product of the preceding unit, and so on. This condition is termed the stage of "increasing returns". As the number of

units of capital and labor increases, a point is passed in the exploitation of the piece of land when the further addition of units of capital and labor results in equal additions of product. This condition is termed the "stage of constant returns." As the number of units of capital and labor continues to multiply another point is finally passed when the further addition of units of capital and labor results in a progressively decreasing additional product per every additional unit, i. e., the product of the last unit of capital and labor is always less than that of the preceding unit, and so on. This condition is termed the "stage of diminishing returns". The same principle applies to all other kinds of production, forms of capital, and kinds of labor, than agricultural, such as industrial, and manufacturing. Natural resources remaining the same, a multiplication of units of capital and labor results in the product successively passing through the above men-

tioned stages. Now extending the limits of our parcel of land and natural resources to our national boundaries the described stages are national conditions. Contemporaneously certain products may be in the stage of diminishing returns while others are in increasing returns and constant returns stages depending upon the relative abundance and demand of various commodities. (For a country to be generally in the stage of diminishing returns it must be very thickly populated, and even then it can recede to the stage of constant returns by importation of raw products from undeveloped regions and exportation of manufactured articles. A country of the size and population of the United States is still in the increasing and constant stages, although certain rare and needed products may be in the diminishing stage.)

“Limited supply” goods are goods of which there is a definite amount in existence which cannot be increased.

“Monopoly” is where a certain commodity is entirely in the control of a single individual or interest to the exclusion of all competition.

Taking up for discussion, first, the determination of price of constant return goods, where the addition of equal units of capital and labor results in equal additions of product, the following quotation presents the accepted theory of the economists.

“We may begin by taking the simplest case, and, for the purpose of bringing into sharp relief a principle, make again an extreme supposition. In the preceding discussion of demand and supply and of market value, an absolutely fixed supply was assumed at the outset. Let now the other extreme be assumed, a supply absolutely flexible. Suppose a commodity produced, under the simplest conditions, by a large number of persons. Suppose that all these persons are competing with each other; that any one

of them can easily engage in producing the commodity, and as easily withdraw from producing it. Suppose all to be carrying on operations under the same conditions, no one of them producing more cheaply than another. Such a commodity would be brought to market under conditions of constant cost, and would be sold at a price conforming to that cost. At any moment its value would indeed be determined directly by its quantity,—that is, by marginal utility as analyzed in the last three chapters. But if its value, so determined, were greater than its cost, more persons would be led to engage in its production, supply would increase, and value would fall. If its value at any time were less than its cost, some persons would withdraw from its production, supply would decrease, and value would rise. The greater the ease of entering on the industry and of withdrawing from it, the more rapid and certain would be the adjustment of supply to that amount

which would just sell at cost price. If perfect flexibility in supply be assumed, the adjustment of value to cost would be perfect, and the article would always sell for just what it cost to produce it.

Before proceeding further, a word of explanation, and in some ways of warning, is needed, as to the sense in which cost of production is here spoken of. The term is used in very nearly the ordinary commercial sense; it refers to the outlays which an employing capitalist must make in order to get a commodity to market. Chief among those is the outlay for the wages. Charges for material are another item. These charges, it is true, commonly imply that another capitalist has previously paid laborers to make the materials, which then have been sold to the particular employer in question; hence the latter may be said to have indirectly hired these other laborers also. Not only the wages paid to workmen, directly or indirect-

ly, must be included, but a reasonable remuneration for the employer's own time and trouble. This remuneration, like that of the workmen employed, is to be reckoned according to current market standards,—what a workman or an employer of this kind would ordinarily receive for his labor. (That is, the salary this employer would ordinarily receive as an employe of a corporation, or firm, etc. for similar services, as a corporation president, or manager, etc. This allowance is generally termed by economists “wages of management.” Ed.) Again, interest on the capital used is to be included, reckoned also according to the current market rate. If the employer borrows the capital, he must pay the current rate of interest on it. If he owns his capital, he considers that he could get a return on it at that rate by lending it out to some one else; and he regards interest on his own capital precisely as he regards remuneration for his own labor,—

something for which a return at the usual rate is to be expected.”

Before entering into a criticism of this theory we may note its two principal implications:

1. As cost of production consists only of wages, interest, and wages of management, and price “just” equals cost of production, *there are no profits*. Furthermore, as economists maintain that in the first three classes of goods enumerated above, increasing returns, constant returns, and diminishing returns, which constitute practically the whole bulk of commodities on the market, price cannot exceed cost of production, there is no such thing as profits in the blood of our whole economic organism. Yet economists enigmatically talk about profits, as witness:

“Profits may be broadly defined as the income of the independent business man who receives neither stipulated wages, rent nor interest. In a somewhat narrower sense they

include whatever he has left over after he has allowed himself interest on his own capital, rent for his own land, and *wages for his own labor*. (ed. italics) This would seem to narrow the meaning of profits down to the reward for taking risk, etc.'

2. As price exactly equals cost of production, an increase or decrease of cost (voluntary, or otherwise if possible) i. e., an increase or decrease of the net sum of wages, interest, and taxation of commodities and industries respectively increases or decreases price. Thus, other things remaining the same, an increase of wages increases price, etc.

According to the above theory of the economists, that cost of production determines price, wages (by the term 'wages' we also include wages of management) and interest must then in some independent way be determined first, added together in each manufacturing unit, and price of commodities thus

computed. But this is putting the cart before the horse. It is not a laborer's inactive person that is hired, nor even is it his labor that is paid for, it is the product of his labor that he is paid for and the price of which on the market finally sets the uppermost limit to which wages can ever attain, the full price of the product, and similarly with interest. For there is no way of determining the economic value of physiologic labor or of the services of a machine except by their products. Labor and capital together cannot receive more than the product of their combined services. But if wages and interest are to be paid in gold, or money the value of the product must first be determined in terms of gold which defines the maximum limit of the sum of wages and interest. Price must, therefore, be determined first, wages and interest afterwards.

What then determines price? Roughly speaking it may be said there is so much

goods upon the market and so much gold, and the amount of gold that would generally be given and received for any commodity on the market at any given time would determine its price at that time. This explanation is correct as far as it goes, but is, of course, superficial.

In our further analysis we shall distinguish two kinds of prices which we shall name 'relative prices', or barter rate, and 'absolute prices', or money prices. In the stage of constant returns where the addition of equal units of capital and labor results in equal additions of product, the 'relative price', or barter value of commodities is measured by the amount of capital and labor that was used in their production. Thus a quantity of a certain commodity representing say one unit of capital and one unit of labor will exchange for a quantity of any other commodity on the market representing an equal portion of capital and labor. Competition will prevent any

one from receiving more or less of units of capital and labor in any other commodity than is represented by his own commodity, as all commodities can be indefinitely multiplied at a uniform expenditure of units of capital and labor. Supply and demand do not affect 'relative prices' of constant return goods. If more of one commodity is demanded than of another the supply can be made to equal demand at a uniform expenditure of capital and labor effort and the commodity of greater total demand and supply will exchange for the commodity of lesser total demand and supply on the basis of unit for unit of capital and labor. (By the introduction of improved machinery in the manufacture of any particular commodity the product per unit of capital and labor may increase, and its barter value per unit of product may be lowered. But the 'relative price', or exchange value per unit of capital and labor remains the same. The manufacturer will

still receive in exchange for his commodity a number of units of capital and labor in other commodities equal and only equal to the number represented by his own.) Prices as measured by this standard, or 'relative prices' cannot change, fall, or rise, but are constant and permanent.

With the introduction of gold or money as a medium of exchange a fluctuating factor enters. Gold is not a constant return good. It is of the nature of a limited supply commodity, a more detailed discussion of which class of goods will be given later, whose value is determined by both supply and demand. Its *relative* supply may increase or decrease by changes in the supplies of other commodities as well as by variations of its own supply. If the relative supply of gold increases or demand for it decreases its value is lowered and prices of all other commodities, expressed in terms of gold, rise. If its relative supply decreases or demand for it increases

prices of the other commodities fall. 'Relative prices' however, of all constant return commodities obviously remain constant, even in terms of gold, regardless of the fluctuating general price level due to variations in the relative supply and demand of gold, being determined by the amount of the factors of production that enter into their manufacture, as each commodity can be multiplied indefinitely at a uniform expenditure of capital and labor effort. Absolute prices are determined by the relative supply and demand of gold, and fluctuate. Absolute prices of constant return goods, or the prices with which we are daily concerned, are thus rigidly and unalterably determined by natural conditions of relative supply and demand of constant return commodities generally and gold, and not voluntarily as the economists would have it.

This principle may be further clarified by the following illustration.

Demand in units of product	Price per unit	Supply in units of product
30	\$8.00	90
40	7.00	80
50	6.00	70
60	5.00	60
70	4.00	50
80	3.00	40
90	2.00	30

In the above hypothetical table are given the supplies and demands in units of certain constant return goods at various prices. As price ascends manufacturers are naturally willing to produce more goods, while consumers wish to purchase less, and as price descends manufacturers produce less goods and consumers are willing to purchase more. Now the price in this instance will be \$5, the point at which supply and demand are equal.

For it could not be less than \$5, as \$4, for instance, for the demand at \$5 is greater than the supply at \$4 and competition of consumers for the product would force its price upwards. And it could not be more than \$5, as \$6, for instance, for then the supply at \$5 would be greater than the demand at \$6 and competition of manufacturers to sell their goods would force price down. The price therefore always settles at the point where supply and demand are equal. By this process price, or the relative values of commodities to gold and of gold to commodities, is determined. In this instance it is decided that one unit of product is worth \$5 of gold, and vice versa. The price of commodities and the exchange or market value of gold are therefore the rate at which supply and demand meet.

Now, other things remaining the same, if the supply of gold should double, so that it would now be applied to less important uses

and its value consequently lowered and more gold offered for commodities we may have the following situation:

Demand	Price	Supply
30	\$16.00	90
40	14.00	80
50	12.00	70
60	10.00	60
70	8.00	50
80	6.00	40
90	4.00	30

The price would now be \$10 per unit or double the former price. The same principle, of course, holds true for any variation of the supply of gold.

Similarly, other things remaining the same, if the supply of commodities should generally increase, prices of commodities would fall.

Again, other things remaining the same, if by the introduction of improved machinery the production of any or all commodities

should increase price of those commodities would fall.

We see then that prices of constant return goods are determined automatically, rigidly, and independently of all other circumstances by natural conditions of the supply and demand of constant return commodities generally (Supply and demand of a particular constant return commodity does not affect its price, except an increase of production due to improved machinery, as 'relative prices' remain constant even in terms of gold regardless of fluctuating general 'absolute price' level) and gold. That is, the general supply of constant return commodities compared to that of gold, and the demand for constant return commodities as a totality as against gold are the determining factors of price. These conditions are summarized in the statement that prices of constant return goods are determined by the relative supply and demand of gold.

The essential characteristic of constant return goods is, other things remaining the same except consequential readjustment of general production, since supply is increased at constant rate and vice versa, that an increase or decrease of supply *in exact response to demand* does not affect their price.

(Owing to international trade, except to the extent restricted by tariff regulations, the whole world may be considered as one country for the purpose of commerce. Variations of supply and demand of commodities and gold in one country will affect prices throughout the world. And so universal conditions of supply and demand are to a large extent a price determining factor in every country. The principles discussed in this chapter take this fact into account, although we reserve treatment of the technical phase of this subject for a succeeding chapter.)

Since according to the economists price is determined by cost of production, i. e., prices

will rise or fall respectively according as the net sum of wages, interest, and taxation increases or decreases, let us now see if that is specifically true in the light of the foregoing discussion.

General Economic Law (covering the entire economic field.)

Axiom. The shares of distribution (labor's and capital's shares) in terms of the product itself cannot exceed the product (all goods of all classes.)

Axiom. The shares of distribution in terms of the same product of any specific kind of the product cannot exceed that product.

By Proof. By the Law of Supply and Demand the value of any kind of the product can be determined in terms of any other kind of the product, as in terms of gold, for instance.

Conclusions:

The shares of distribution of one kind of

the product in terms of a second kind of the product cannot exceed an amount of the second product of equal value with the first product.

Price determines limit of cost of production.

Cost of production cannot alter or affect price.

Variations of wages, interest, taxes on commodities and industries, and income taxes do not affect price. (See Chapter IV, Part II Sec. 2. The same applies to specific taxation.) Shares of distribution and taxes must accommodate themselves within price, as they naturally cannot exceed the product, or price which is the whole product. Thus wage increase and taxes do not affect price, and *cannot be shifted to consumer*. The product consisting of wages, interest, taxes, and profits, a net increase of the sum of the first three items is therefore at the expense of profits and a decrease in favor of profits.

Our theory, then, that price determines limit of cost of production is the exact reverse of the economists' theory that cost of production determines price. And the corollary of the economists' theory that variations of the net sum of wages, interest, and taxes of all kinds are followed by corresponding variations of price is also the reverse of the corollary of our theory that variations of cost do not affect price.

The fallacies of the economists' theory are:

- (1) That it assumes that wages and interest are in some mysterious way determined before price, i. e., before the *product* of capital and labor is priced on the market and thus the value of their services in some manner appraised.
- (2) It entirely ignores the fact that gold is not a constant return good, and that it's 'relative' value is determined by a different principle, depending upon its own characteristic specific variations of supply and demand relative to all other commodities.

Thus even assuming that wages and interest are in some unknown way predetermined to amount to a certain quantity of gold, price could neither be reduced nor raised to cost of production, or wages and interest, by competition on part of supply or demand respectively, if the exchange value of gold for the *commodities*, as determined by the law of supply and demand, is respectively less or greater than the cost of production theory assumes, i. e., if more or less gold respectively is paid for commodities than cost of production.

It is true that in the stage of constant returns product can be multiplied at a uniform expenditure of capital and labor effort and 'relative prices' are therefore constant, but it must be borne in mind that gold is of the nature of a limited supply good. And if 'absolute prices' of constant return goods are determined in terms of gold, the same procedure simultaneously determines the price

of gold, a limited supply commodity, in terms of constant return goods, a process governed by a different principle than 'relative prices' of constant return commodities and resultant of different direct and corollary consequences.

But even if absolute price of constant return goods were measured in terms of a constant return commodity it does not follow that price would be determined by cost of production. Absolute prices which in this case would coincide with relative prices would indeed be determined by the amount of capital and labor *effort* that entered into the manufacture of the various commodities and the medium of exchange. But that does not mean that price would be determined by *cost* of production (*actual* wages and interest.) Price here is also determined *first* regardless of cost of production.

Even the question whether or not cost of production always merely equals price with-

out determining it must be decided not under a discussion of value or price but under the topic of wages and interest and by some theory of wages and interest that the latter are or are not equal to the whole product. Under no circumstances then could cost of production ever determine price. This should be quite apparent superficially. For until we know the price of the product we do not know what the productive factors are worth, and the value of the productive factors can never exceed the price for by receiving the whole price they receive the whole product. (Of course, whether or not price can be voluntarily altered to correspond with variations of cost, which as we have proved it cannot, is not so readily apparent on the surface.) Whether or not wages and interest amount to the whole price and what their relative portions are must be determined by a discussion of wages and interest and not price. Price is independently determined first, and sets

the limit of the sum of wages, interest, and profits, the relative proportions of the latter within price being determined by other principles already discussed in the preceding chapter.

In the stage of increasing returns, as already explained, the addition of successive equal units of capital and labor results in a progressively increasing additional product per every additional unit of capital and labor. The greater product of the last unit, however, is not attributable to the last unit solely but is the resultant of all units combined. The removal of the first unit will decrease the total product by as much as the removal of the last unit. The total product is the result of the mechanical co-operation of all units, and is divisible equally among all units. Relative values, or 'relative prices' of increasing return commodities are measured by the amount of capital and labor used in their production. Competition will prevent

an increasing return commodity from exchanging for more or less units of capital and labor in any other increasing return commodity than it contains itself, as increasing return goods can be multiplied indefinitely at a progressively decreasing expenditure of capital and labor effort. Thus if the units of capital and labor of one commodity were overrated as against equal units in other commodities, more persons would be led to engage in its production, supply would increase, and value would fall; and if its units were underrated, some persons would withdraw from its production, supply would decrease, and value would rise. An equilibrium of 'relative prices' on the basis of unit for unit of capital and labor is thus established.

Since relative values, or 'relative prices' of constant return goods are determined on the same basis, 'relative prices' between constant return and increasing return goods are also determined on the same

principle, viz. unit for unit of capital and labor. For if, for instance, units of capital and labor in increasing return commodities were overrated as against equal units in constant return commodities there would follow a movement of capital and labor from the latter into the former, supply of increasing return commodities would increase, and value would fall, and vice versa. Thus a constant return commodity representing a certain number of units of capital and labor will exchange for any increasing return commodity containing an equal number of units of the productive factors, and vice versa.

‘Relative prices’ of increasing return commodities are determined by the amount of capital and labor employed in their production. ‘Absolute prices’, or money prices of increasing return goods are determined by the relative supply and demand of gold.

The same principles govern the determina-

tion of 'relative' and 'absolute' prices of constant return and increasing return commodities. (The economists' theory is that prices of increasing return goods, as of constant return goods, are determined by cost of production.)

The essential characteristic of increasing return goods is, other things remaining the same except consequential readjustment of general production, since supply is increased at increasing rate and vice versa, that an increase or decrease of supply *in exact response to demand* respectively decreases or increases price.

In the stage of diminishing returns supply increases at a decreasing rate. That is, more labor and capital is required to produce a given quantity of product in a succeeding step of diminishing returns than in the preceding, and so on. 'Relative prices' of diminishing return commodities are therefore determined by the amount of capital and labor used in the

production of the marginal products. Thus one diminishing return commodity representing a certain number of units of capital and labor as measured by its marginal product will exchange for any other diminishing return commodity containing an equal number of units of capital and labor as measured by its own marginal product, as equal units of capital and labor are as productive in one commodity as in another, and competition establishes the equilibrium of exchange on that basis. And similarly does a diminishing return commodity exchange for a constant or increasing return commodity on the basis of unit for unit of capital and labor as contained in the marginal product of the diminishing return commodity and in the constant or increasing return commodity. What the marginal product of a diminishing return commodity per unit of capital and labor is to be is determined by supply and demand. If the demand is very great a distant marg-

inal step will be reached where the product per unit of capital and labor is very small. On the other hand, the magnitude of the response of supply to demand is also a determining factor of the step to be reached and of the size of the marginal product.

Absolute prices of diminishing return commodities are determined by the relative supply and demand of gold.

The essential characteristic of diminishing return goods is, other things remaining the same except consequential readjustment of general production, since supply is increased at a decreasing rate, that an increase or decrease of supply in *exact response to demand*, respectively increases or decreases price.

Limited supply goods are goods the supply of which is fixed and cannot be increased. Such goods are, for example, wines made of grapes growing only in certain regions; brands of tobacco, etc.; rare metals and precious stones whose discovery and production

are accidental and sporadic, supply remaining intermittently constant for long periods of time; paintings and sculptures of old masters, old books, autographs of distinguished men of the past, etc. The prices of such commodities are determined purely by demand, as may be seen from the following illustration.

Supposing there are ten autographs of a noted man of the past in existence, the supply and demand schedule may be as follows:

Demand	Price	Supply
1	\$200	10
5	175	10
10	150	10
15	125	10
20	100	10

The price is \$150. It is determined purely by demand as supply does not change.

In the case of monopoly goods where the whole supply of a certain commodity is in the exclusive control of a single individual or in-

terest price may be fixed arbitrarily at any point at the pleasure of the monopolist. There is, however, an impersonal price controlling principle even in monopoly. If the price is set too high sales decrease and total profits may be less than if price were set much lower and sales thereby greatly increased. As, for instance, a man will make much less profit by selling one ten dollar pair of shoes for one thousand dollars than by selling a million pairs at twenty dollars a pair. A monopoly product will therefore carry a price which brings the greatest total of profits to the monopolist.

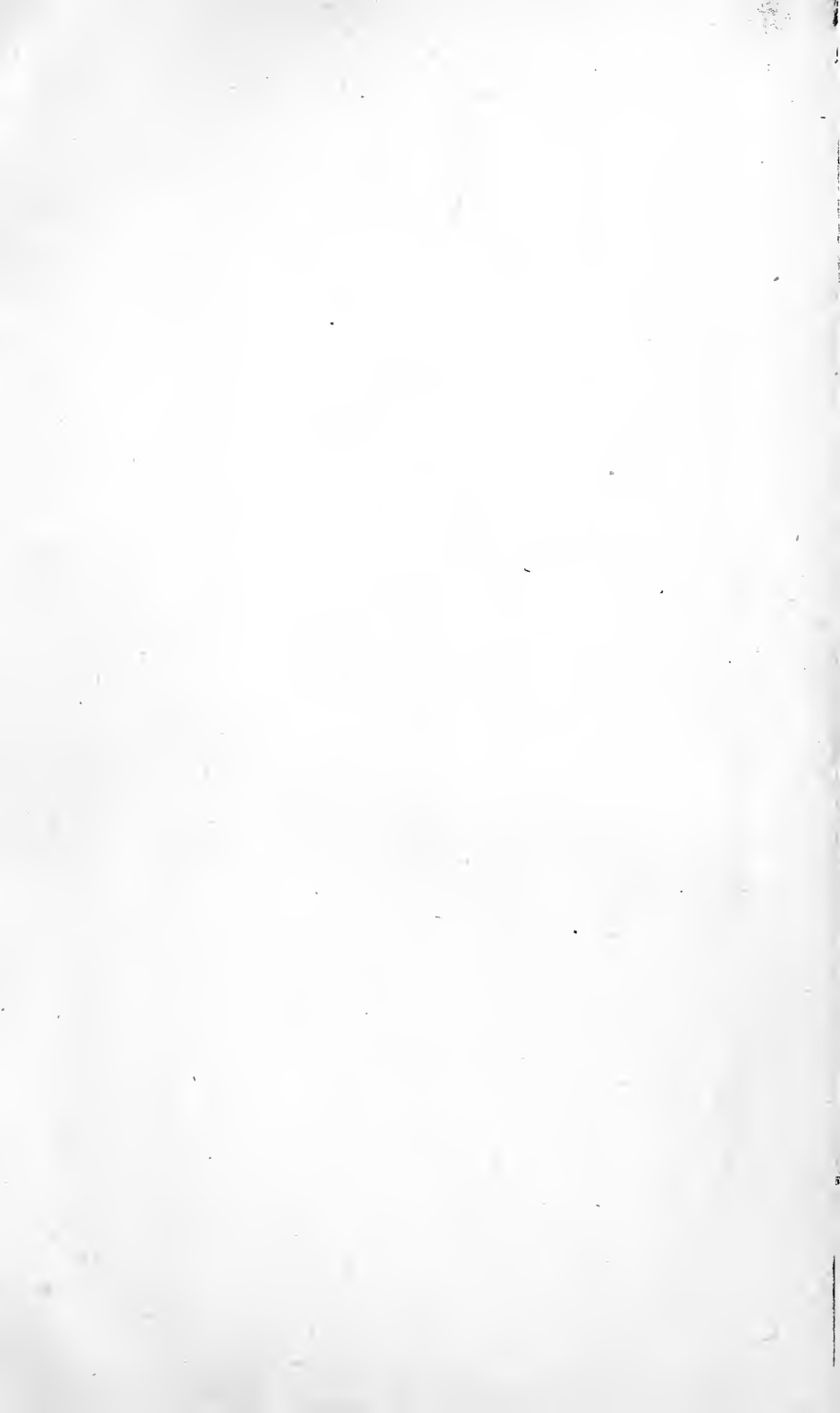
We have seen that prices cannot be raised arbitrarily under a competitive system. Could prices be increased voluntarily on a non-competitive basis, that is, for instance by a common agreement of all manufacturers, eliminating all possible competition? If prices were thus universally raised it would require a corresponding expansion of bank credit in

order to furnish an adequate medium of exchange. The value of the dollar in the forms of bank credit and currency would then fall below that of the gold dollar. (Of course, the manufacturers as such have arbitrarily decreed that the gold dollar shall now be worth less in terms of other commodities, but as far as the people generally are concerned gold retains its original value, and if it is now worth less as money more of it will be used in the arts.) Bank credit would be exchanged for currency and currency for gold. The government gold reserve would be threatened with depletion, and the banks to keep from closing their doors through their inability to meet the unlimited demand for currency would be compelled to curtail credit until the value of the fiat dollar was brought back to that of the gold dollar, and prices of commodities consequently restored to former competitive level. And if manufacturers should persist in the maintenance of artifi-

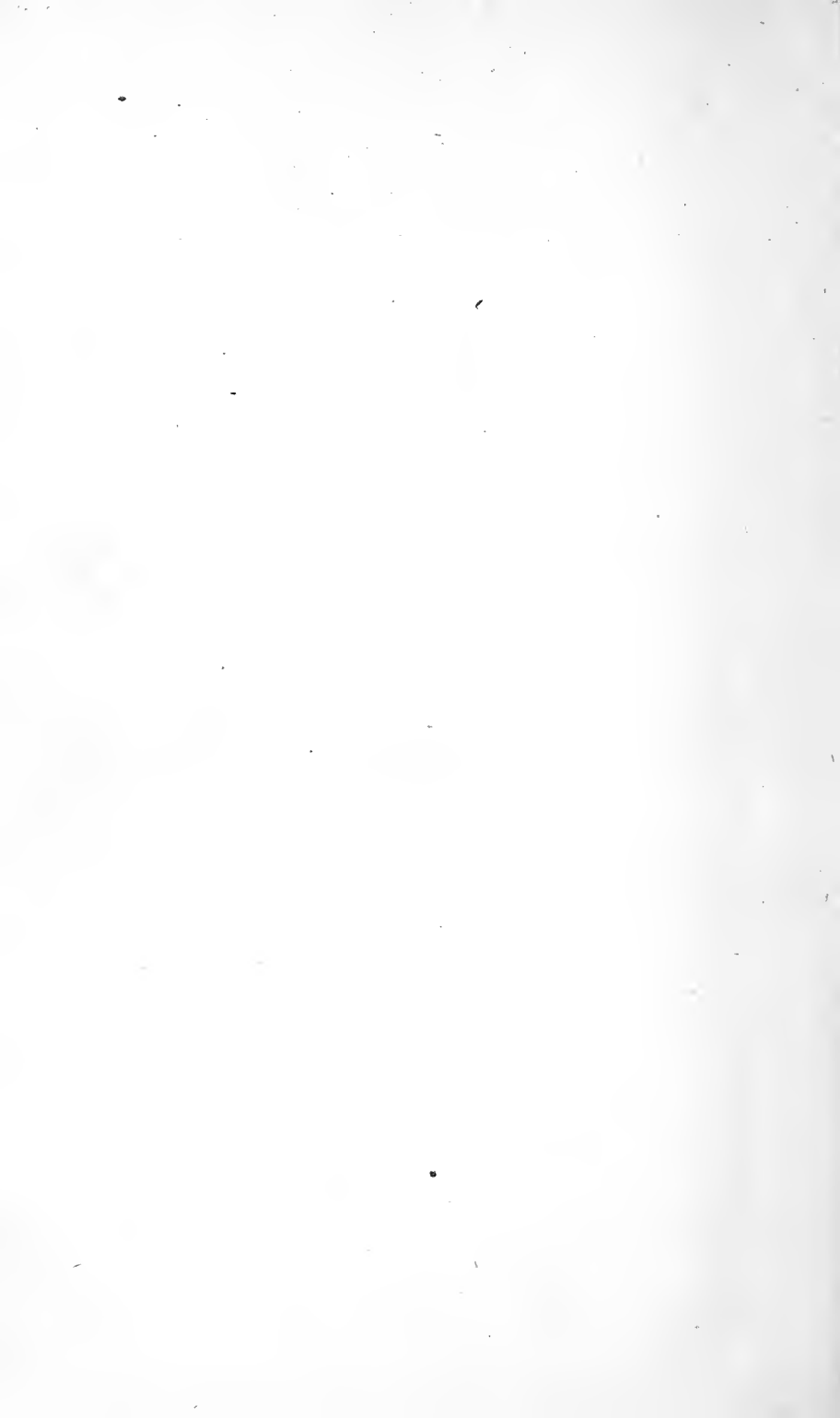
cially high prices in spite of an inflexible medium of exchange they would be left with stock on hand impossible to sell (For basic circulation of money, effective of such a condition, see Chapter 1.) But if an inflation of currency and bank credit should continue until the government is forced onto a paper standard prices would indeed remain higher but in terms of irredeemable, debased paper money and not in terms of gold. Under no circumstances therefore can prices be raised voluntarily in terms of gold or any other commodity, and as long as the government maintains a commodity standard there can be no voluntary rise of prices. And even under a paper standard prices can be changed arbitrarily only by changes in the relative supply of currency.

The present (1920) high prices are due to the great increase of the supply of gold in this country (see Chapter IV, note 14) and the consequent cheapening of the gold dollar.

The present administration is being criticized for causing the "high cost of living" by inflating the currency 87.5%. But the increase of the supply of currency is an effect and not a cause of the high cost of living. The gold dollar having fallen in value prices correspondingly rose, and as practically twice as much money must now be paid for commodities as formerly an increase of the supply of currency became imperative to meet the needs of commerce, the increase of currency exercising no effect on prices.







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